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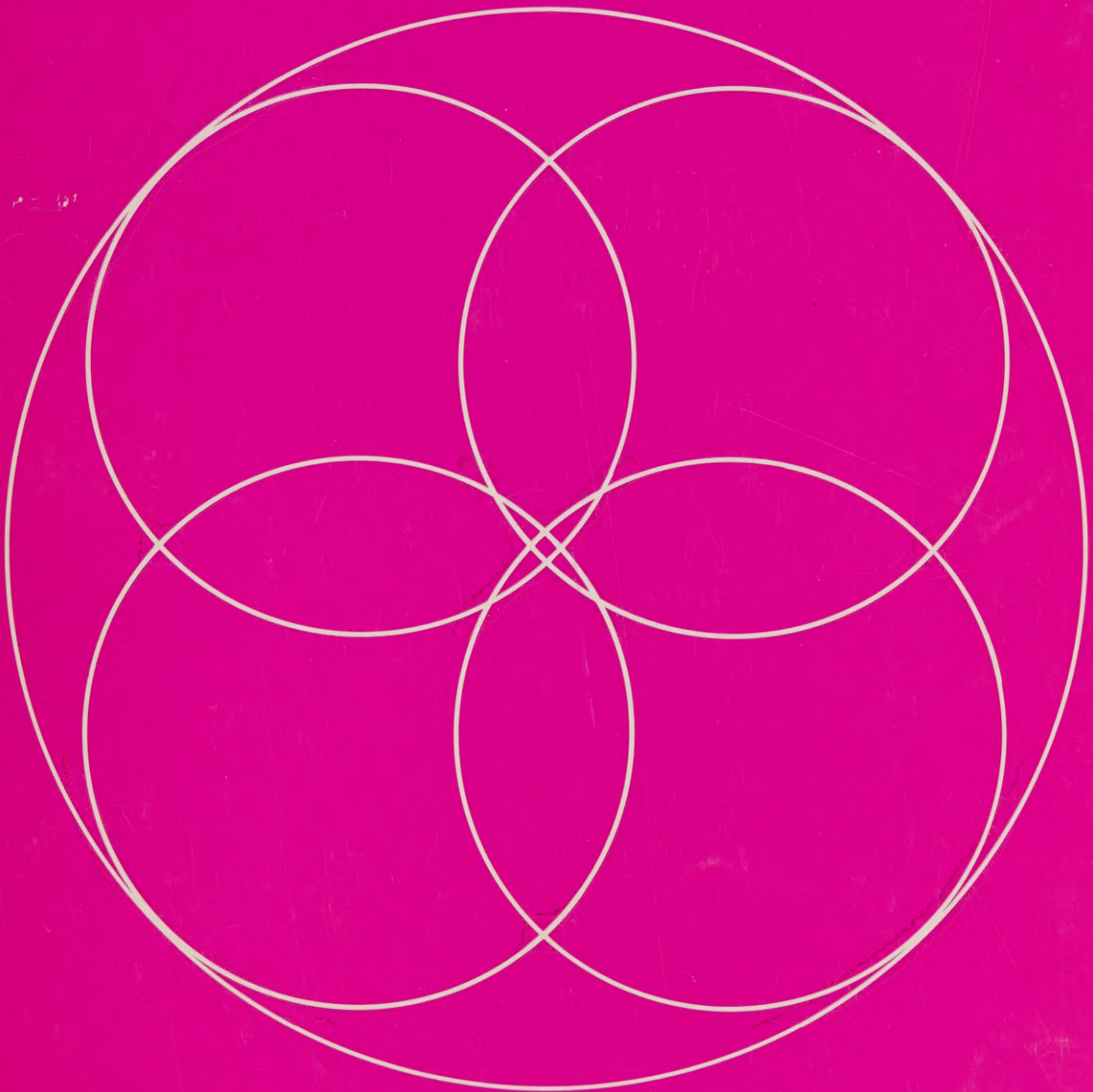
# Improving Management Performance:

Government  
Publications

The Contribution of Productivity  
and Performance Measurement

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Series B Publications  
Technical Papers

# Improving Management Performance:

The Contribution of Productivity  
and Performance Measurement

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*P.J. Lawton*

November, 1977

This Publication has been Prepared as Part of  
The Local Government Management Project

A Joint Project of

2 The Ministry of Treasury, Economics and Inter-  
governmental Affairs, Province of Ontario

The Cities of London, Ottawa, and St. Catharines and  
The Regional Municipality of Niagara

The School of Business, Queen's University at Kingston





## Preface

The Local Government Management Project (LGMP) is a long-term experimental project to research methods of improving management in local government. It is jointly sponsored by the Province of Ontario and four Ontario municipalities. The Project was designed, implemented, documented and evaluated by a Project Team from Queen's University assisted by Project Leaders (internal facilitators) in each of the participating municipalities.

The events and experiences that occurred as the four municipalities applied new management practices to their operations, have been documented in detail. Lessons from those experiences have also been extensively documented and evaluated. Papers containing both the history and the evaluation are published at intervals, as the Project progresses, under the general documentation heading of 'Series A Publications: Documentation and Evaluation'.

As the Project developed, however, it was realized that there were certain aspects of management improvement that should be covered in greater depth under specific headings. Consequently, this paper on the contribution of the measurement of performance to effective management in local government, is one of a series of documents devoted to an investigation of the application of specific modern management concepts and tools to municipal operations. This series, called 'Series B Publications: Technical Papers', highlights areas of management that require either greater attention or greater documentation, at least from a Canadian perspective. Other topics covered in this series are as follows.

- 1 Strategic and Corporate Goal Setting in Local Government.
- 2 Organizational Change in Local Government.
- 3 Systematic Approaches to Information in Local Government.

Further details of LGMP publications are given in Appendix III to this paper.

These technical papers consist largely of summaries of developments and practices in the specific management topic area in Canada, the United States, and abroad. They include an attempt to put that information in


perspective as a result of the LGMP experience. It is hoped that the information contained will be of use to municipal administrators, elected officials, and other interested individuals in developing a deeper insight into some important management processes in local government.

The final publication of this paper was dependent upon the efforts of several individuals and the support of others. Jim Nininger, Gord McDiarmid, Ray DeBlasi and Charlie Ketcheson contributed many patient hours throughout, and Bonnie Brown from the Ministry of Treasury, Economics and Intergovernmental Affairs lent her support, helpful comments and insights over the long and tedious gestation period. Any questions or comments on the material covered in these papers will be welcomed and may be directed to the authors at the School of Business, Queen's University, Kingston, Ontario.

The authors would like to express their appreciation to the Province of Ontario, Ministry of Treasury, Economics and Intergovernmental Affairs, Advisory Services Branch and, in particular, Ted Gomme, for the support of this undertaking to help local government managers to improve the operation of their organizations.

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November, 1977



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## Executive Summary

This paper reviews a number of ways in which performance can be measured in the local government setting. Performance measurement is regarded as an integral aspect of management, which inter-relates with other aspects of the management process and which contributes to productivity improvement. In fact, evidence of a clear understanding of management and the development of efficient processes of management can be regarded as a measure of management effectiveness. As a first step in clarifying the relationship between measurement and other management processes, a management framework, which incorporates the role of measurement, is outlined in Part II.

The approach taken in this paper is a reaction to what appears to be two major weaknesses of performance and productivity measurement in the past. These weaknesses include:

- 1 the rather general tendency to look upon performance measurement as a superimposed control process, rather than as a device which managers can use to increase their effectiveness; and
- 2 a tendency to regard management as a 'black box' and to concentrate upon the measurement of inputs and outputs, with little regard or concern for the ways in which managers actually do their jobs.

The first section of this paper establishes the context, through a discussion of what is meant by effective management. In this section, a framework is established for use as a basis for the discussion and evaluation of the various approaches that have been taken to measuring performance in municipalities. One of the major contributions of this paper is that it directly relates performance measurement to effective management. Surprisingly, this relationship has been very tenuous in past discussions.

The main body of the paper concentrates upon a review of measures and measurement systems. These include output, fiscal, program and management process oriented measures. The remainder of the paper relates these different approaches to the management framework. Examples of all the approaches are given, as are specific examples from the LGMP experience, in Appendix I.

A major emphasis throughout this paper, is upon the acceptance by individual managers of responsibility for the efficient and effective management of their operations. There is a need for managers at every level to define the purpose of their operations very clearly, to set definitive objectives and to develop procedures and processes whereby they can interrelate most effectively

with other members of the organization. In other words, the processes of management are considered to be measurable and subject to improvement. This is in contrast to the stress usually put upon inputs and outputs.

Local government has been particularly weak in defining clearly understood roles at the council level, while management processes and procedures have generally been hampered by the tradition of relatively independent departmental operation at the administrative management level. Again, the development of procedures which lead to effective processes in both of these areas is emphasized.

The tendency to use measures as controls, particularly in financially oriented systems, is brought into question. It is suggested that management at each respective organizational level must take responsibility for monitoring efficient and effective management at the level below. This can be most effectively accomplished through the identification of clear goals and objectives at each level and the definition of procedures for interaction where necessary. Each manager needs to define measures which will indicate how efficiently and effectively he is performing. Where managers are responsible for programs, program purposes need to be defined and clear goals, objectives and performance indicators established at the outset. Unless a program has a clearly defined purpose and clearly defined goals and objectives, the effectiveness of that program is impossible to determine – measures must be related to what the program is established to achieve.

The same approach holds true at the council level. Councils too, need to clearly define roles and to discriminate between their political and management roles. Municipal corporate goals and objectives are necessarily political in nature because they should represent the most appropriate resolution of conflicts in planning for the future. The implementation of those goals and objectives, on the other hand, is a management process, and council, as the top management level in a municipality, must ensure that rational management processes are established to fulfill that role. The development of incentives and reward systems, which are capable of discriminating between effective and less effective performance at the top administrative level, is a crucial aspect of council's management role. To do this effectively, council needs advice from personnel experts. Unfortunately, this type of utilization of expertise is rare in local government.

It is recognized that there is a need for control processes

in addition to individual managerial acceptance of responsibility. Once again, however, it is felt that the emphasis should be upon the way in which financial audits, management audits or performance appraisals can assist managers and help them to develop better management systems. At the same time, of course, these processes should help to identify and eradicate ineffectiveness and inefficiency in the system. The best control processes, however, encourage managers to improve their performance and give them some direction to do so rather than just penalizing those managers that step out of line.

Essentially, this paper contributes two new practical dimensions to the use of performance measurement in local government.

- 1 It presents a broadened perspective of performance measurement that relates it directly to a framework of effective management.
- 2 It suggests the incorporation of a systematic approach which will allow managers at all levels of authority to evaluate and review the performance of their own activities, and which will enable them to determine what they personally can do to improve their own operations and the effectiveness of the organization.

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# Part I







# An Introduction to the Measurement of Performance in Local Government

Performance measurement provides feedback to a manager, to a group or to an organization regarding the impact made by their efforts on the job. This feedback may take a number of forms but its primary purpose is to tell managers what is currently being accomplished on the job to enable them to improve subsequent performance.

Interest in the measurement of performance in the public sector has been greatly stimulated over the last five years. Much of this interest and activity has been centered on developing and experimenting with measures of efficiency and effectiveness in the delivery of local government services. Some major reasons for this surge of enthusiasm for measurement include double-digit inflation, the more prominent role of government in society combined with a growing distrust of large institutions, including government, the problems of the growing energy crisis, the warning signal provided by New York's financial dilemma, and some dramatic changes in work-related value systems. Caught between the growing demands for more and better services and the ever-rising costs of providing them, municipalities have sensed a need to improve their productivity.

One of the effects of this squeeze has been a growing interest in the relationship between the impact of the government on the environment and the resources that are used to support that impact. Increased awareness of performance is a natural result of this interest.

There are many serious limitations or constraints both upon performance and the ability to measure it in most local government organizations. Some of these may be necessary limitations, imposed by the nature of the task, the political process and the variability of the people being served. It is important, however, to distinguish between what actually happens as a result of local government activity and what can happen, and to measure results or performance where possible. Otherwise an unnecessarily inefficient, ineffective and costly operation may result.

Performance measurement can provide information which will help managers in many ways.

- 1 It can help administrators and elected representatives to gauge the impact of municipal programs and to generally assess the performance of the municipality in providing the services desired by the citizens.
- 2 It can assist support department managers to determine whether or not they and their staff have been successful in producing the service or product de-

sired by those line departments which depend upon them.

- 3 It can provide a comparison of performance with a standard, an ideal level, or among departments, sections or even different municipalities, thus giving an indication of relative efficiency.
- 4 It can provide the information needed to guide decision-makers in assessing the relative value of allocating resources to one service area as opposed to another, thus increasing the discretionary power of both elected and administrative officials.
- 5 Performance measurement information can indicate what the cost of producing the product or service is per unit, and whether or not that cost is as low as reasonably possible. These measures can lead to cost reductions because they will stimulate more efficient methods of operation. Performance measurement pinpoints management areas which need to be improved and creates pressure for action.
- 6 It can provide a measurement of the extent to which time or money is saved and/or the degree to which the quality or quantity of the product or service is improved as a result of some definitive management action.
- 7 It can help to ensure that the services supplied are aligned with the policy objectives of the local government; that is, to measure the effectiveness or success of the municipality, its departments and individual managers in achieving stated objectives. Also, as data are collected over time, trends are revealed, and it is possible for individuals to determine whether improvements in performance are being made and at what rate.
- 8 Through impact studies, it can help to assess the appropriateness of the policy objectives themselves.
- 9 It can help municipalities to develop fair reward systems based on actual levels of performance and thus to reward higher productivity and positive changes.
- 10 The fact that performance can be measured provides an incentive for the improvement of performance and can, in itself, encourage efficient management.

The potential benefits are numerous but performance measurement also has its problems, especially for non-profit monopolies in an undefined marketplace. The most basic and pervasive unresolved problem involves what to measure and how to measure it. Possibly it is for

this reason that performance is so seldom measured or effective management appropriately rewarded in Canadian municipalities. Unfortunately, no up-to-date, state-of-the-art survey is available but from the LGMP experience and research, it appears that Canadian attempts to measure the productivity of any aspect of local government activity are few and far between. In the actual utilization of measurement in local government management, however, Canada may not be too far behind the United States, in spite of a lag in research. American commentators in the early 1970's noted that costs were rarely associated with output measures and several studies have illustrated the difficulties associated with the development of standards which apply across different situations.<sup>1</sup> It is safe to conclude that little is known about the productivity of local governments.

Some governmental organizations which have become involved with measurement have recognized the potential benefits.<sup>2</sup> They have found that some indication of performance is an essential prerequisite for success in most innovative administrative programs, whether those programs involve organizational development, strategic planning by council, administrative planning, or the use of operational models. Without indicators and information systems which provide feedback regarding the adequacy of the services being provided, initiative soon disappears, and/or efforts may be misdirected.

Essentially, performance measurement is a fundamental part of the management of an organization, providing an understanding of where an organization stands, whether or not it is performing its role and how it can improve its operations over time. Approaches to the measurement of performance, therefore, must flow from the concept of management itself, providing the information and guidelines required to assist efficient and effective management. If the potential benefits of performance measurement, as outlined above, are to be realized, measurement must be regarded as a fundamental aspect of management and there must be a special focus upon its contribution to managerial decisions, activities and processes.

The authors of this paper firmly believe that any attempt to measure the performance of an organization

should include the clear identification, understanding and measurement of the management activities involved in operating that organization. This statement suggests a different approach to performance measurement than has been taken to date, although some of the same tools and techniques are relevant. The purpose of this paper is to outline and discuss this new approach in the perspective of what has gone before.

In short, what we hope to contribute through this paper, is a broad perspective on performance measurement which moves away from the narrow emphasis on either input or output and focuses as well on the measurement and improvement of management performance. This comprehensive approach should provide a context for management improvement, through the examination and evaluation of existing management systems.

The following section will describe a framework or perspective for understanding how performance measurement can be seen as an integral part of the management of a municipal operation. The remainder of the paper will use this framework as a basis for the discussion. Parts III, IV, V and VI discuss the approaches which have been taken to incorporate measurement in management systems. This discussion emphasizes the different types of measures used in each approach and the purposes they have fulfilled. Further examples of measures and more information on current practices are given in Appendix I.

Part VII evaluates the various approaches and an attempt is made to draw them together. It also includes recommendations for future attempts at performance measurement. The paper concludes with Appendix II, an annotated bibliography of the literature found most useful as a basis for this discussion.

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1 36 (Footnote numbers refer to publication in bibliography, Appendix II).

2 See Performance Measurement Programs described in Appendix II.

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## A Framework for Measuring Performance

Managers need information which provides them with feedback in order to measure and evaluate their own performance. Armed with this knowledge they can adapt their operation to meet client needs more adequately and economically, whether that client is the public or a part of their own organization. Measurement and evaluation, therefore, are fundamental aspects of an overall management process. This process should include the following:

- 1 the development of a clear understanding of the purpose of the organization and of all its elements (the reasons why they exist);
- 2 the identification of both the general goals and specific objective activities which an organization and its sub-organizations need to carry out to achieve their purposes;
- 3 the development of structures and procedures which will result in appropriate patterns of interaction and processes of management to achieve the goals and objectives, and the obtaining of the necessary human, material and financial resources;
- 4 an ongoing adaptive management operation involving monitoring, controlling and continuous feedback;
- 5 a periodic, detailed, evaluative procedure for ensuring that the purpose of the organization is being fulfilled and its goals and objectives are being achieved; and
- 6 both ongoing and periodic modification and re-establishment of goals and objectives.

Effective management therefore involves a continuous and circular process of clarification of purpose, planning of activities, implementation of those plans, monitoring of the production process and modification of that process and previous goals and objectives, in response to feedback. Measures of performance are needed throughout. In fact, one measure of effective management may be the very existence of each recognizable part of a management process such as the one described. Other measures may involve a determination of how well those processes are being carried out and what the costs are in terms of time and other resources.

Output measures, related to objectives and to costs, are indicators of organizational effectiveness and efficiency which can identify areas for improvement. The efficiency of management processes (the things managers do) is also important and can also be measured. When output is measured in combination with the processes

of operation, information which helps in adapting to changing requirements and in management improvement is more readily attainable. Without measures of the processes of operation, management essentially functions in a vacuum, yet the LGMP experience indicates that this type of analysis is probably the least developed area of municipal management. This apparent lack of interest in management processes is all the more startling in government agencies, because they do not have the valuable measurement criterion of profit and they, therefore, need all possible indicators of effectiveness.

Too often, the circular process of management, as described, gives way to a short-term perspective, and managers bump along from crisis to crisis without learning from, or perhaps even identifying, their successes and failures along the way. Since they are not clear exactly where their organization stands, what has happened in the past, or what action was taken, the lack of a performance measurement system, related to particular management activities, will tend to result in reactive rather than proactive management.

It would seem that the most useful approach to performance measurement is to take a broad perspective in identifying the types of performance information that are needed for effective management at each position and management level. Although the requirements for an effective management system are the same at each level in the management hierarchy, the type of information needed to be fed back into the system will differ quite significantly, often differing for each manager.

Very junior managers, close to the production process, usually have a relatively short time horizon. They tend to be technicians, dealing with practical applications. Feedback needs to be immediate. It tends to deal with tangibles and, as a consequence, measurement is relatively easy. Even at low management levels, however, the processes of interaction with subordinates are important, particularly if the expert input of those subordinates is needed. Measures of such processes are difficult but possible.

Both middle and lower level managers develop tactics from strategic and corporate plans created at a higher level. At these higher levels the time horizon is lengthened. For instance, in the case of road repair, where the junior manager may be interested in deciding which holes in the road to fill, what mix to use and how well his people are performing, the middle manager decides which streets require repair and in what order over the next few weeks or months and what type of

manpower will be required over that period. The decision processes and the processes of monitoring and control will be quite different at different levels.

At the more senior levels the concern is with policy, planning and strategy. Decisions involve the defining and redefining of the organization's purpose, its strengths, weaknesses and resources, and determining how it can best allocate its resources to maximize the organizational impact on the environment over time. Using the road repair example, decisions might involve whether the organization should be responsible for road repair and, if so, determining how holes in the street can be prevented or how the problem can be approached more efficiently and effectively, perhaps by contracting the job out.

Obviously the type of information required at each level to determine how well the activities are being performed will differ significantly. The tactics of a job may be executed very efficiently, however, the measures that are well suited and developed to indicate this efficiency will probably not measure the appropriateness of the planning and strategy decisions upon which the tactics were built. If the strategy is wrong, measurement related to execution will not indicate that error. Conversely, the type of broad, long-term information needed to assess strategy will not be useful to the tactical manager who wants specific feedback on the way his crew is performing.

Essentially, performance measurement information is of three main types, requiring quite different measurement systems. These types are:

- 1 measures of the service delivered;
- 2 measures of cost effectiveness; and
- 3 measures of actual managerial behaviour.

Strictly speaking, managerial behaviour contributes to the effectiveness of service delivery. The relationship is not always direct, however. It is not always easy to pinpoint the independent variable upon which service delivery effectiveness relies. Also, since the degree of influence upon service delivery effectiveness differs for managers at different levels, the distinction between service delivery and the managerial contribution to that delivery is real and important. Unfortunately, this distinction seems to have been overlooked in the literature, and management takes on the aura of a 'black box'. Measures of actual managerial performance appear to have been neglected in previous discussions of performance measurement and organizations are seldom really aware of the actual activities or of the effectiveness of its managers.

In summary, the rationale for performance measurement lies in its potential contribution to effective management. The framework for effective management involves managers at all levels defining their purpose, establishing goals and objectives, getting the necessary activities under way and monitoring and evaluating progress. Managers at the upper level of the hierarchy plan, establish the corporate strategy and activate large portions of the organization, while those at the lower levels ensure the efficient execution of tactical opera-

tions. Managerial goals and objectives at each level contribute to those of the higher level. Measures of actual managerial performance or behaviour are essential for management improvement under this system. The types of measures needed at each level will differ and will be determined by the scope of operation of each manager. In this framework, performance measurement, or management information feedback, is based on a determination of the type of information that will be needed by managers at different levels in order that they may monitor, control, evaluate and review the things that they do.

Local government managers have developed a number of different strategies to provide them with this feedback. Most early attempts at the process of performance measurement dealt with inputs into the organization. These were usually related to the budget process which existed as a line-by-line budget dealing with objects of expenditure. It was realized, however, that by themselves, inputs were not good indications of performance. Measures of output or activities were next recognized as being essential indicators of performance. Thus interest turned towards the development of strictly output or throughput productivity measures. These were tangible, highly visible and therefore political, and they were also relatively easy to measure in quantitative terms. Examples would be tons of solid waste collected or miles of road paved.

More recently, however, the growing interest in performance measurement has demanded that measures become more useful with respect to their ability to define areas of management weaknesses and strength and to identify potential areas of management improvement. More complex measures have emerged as the number and variety of requests for feedback on municipal performance have grown.

Engineering managers are not the only ones interested in measuring their own performance, but other 'soft' service departments, support departments, budget committees and committees of council are also looking more carefully at both their management and the impact of their decisions. At the council level, the recent financial constraints have led to the awareness that there is a need for more effective means of evaluating the performance of administrators and of developing reward systems for effective management.

The growing demands of an increasing number of citizen groups have also prompted a recent enlarging of the performance measurement concept to include such areas as recreation, health services, pollution control, traffic flow patterns, spending priorities, community services, etc.

In an attempt to meet these demands, finance departments are requiring and developing more refined systems to track financial performance. Financial audits are no longer sufficient to satisfy municipal needs and as a consequence new financial methods such as zero based budgeting, covered elsewhere in this paper, are being tested for their appropriateness in meeting municipal needs. Management auditing is a new phrase which is becoming more common and some financial audits,



such as the Auditor General of Canada's reports have considerable implications for management.<sup>1</sup>

As the need for better methods of evaluation grew, so the approaches become more sophisticated. The basic problems facing any attempt to measure performance remain the same, however. These are:

- 1 what to measure — what inputs and outputs are directly related to effectiveness and efficiency and will provide the most valuable information;
- 2 how these measures can be obtained — what instruments can be used to ensure that the information obtained will be valid and reliable; and
- 3 how this information can be most appropriately used by managers to improve their performance.

The next four parts of this paper investigate some of the systematic ways in which administrators have approached the problem of performance measurement. The discussion will examine the types of measuring systems that have been devised to monitor, control, evaluate and review the accomplishments of both managers and municipal organizations. The different types of measuring systems can be defined as follows:

- 1 output oriented approaches, measuring the impact of the municipal 'products' on the environment;
- 2 fiscally oriented approaches, more broadly based attempts to measure strategies and programs on a cost and benefit basis;
- 3 program oriented approaches, measuring the effects and value of the various municipal programs as a whole; and
- 4 management process oriented approaches, attempting to measure the performance of managers or organizations directly rather than indirectly through the output of the organizational units.

Each of these approaches will be discussed and analyzed in turn.

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<sup>1</sup> The Auditor General's Financial Management and Control Study of 1975 was essentially a management process audit.





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## Part III



## Output Oriented Approaches

Output oriented approaches are so called because they are related to the delivery of the final product or service. They attempt to measure the quantity of output, the direct impact of the product on the environment, the level of delivery, the cost of that level, etc. Output measures can be broken down into three classes:

- 1 throughput measures,
- 2 efficiency measures, and
- 3 effectiveness measures.

This ranking is in order of complexity and value to the different organizational levels. It is also the order in which they can most readily be introduced to local government services, in terms of existing data, the time required to develop valid and reliable indicators, and the costs involved. These various output measures will be defined in greater detail beginning with the most basic.

### 1 THROUGHPUT MEASURES

These are product oriented measures which focus on the output or result of an activity without any particular regard for the cost, value or worth of that output. Throughput measures include such quantities as gallons of water processed, number of households served, number of patients treated, welfare cases processed or crimes solved, etc. These are the most popular performance measures. They are also the simplest measures, tending to concentrate on the tangible results — those things which are amenable to simple measurement by number.

The usefulness of throughput measures tends to be very limited because the information contained is minimal. Output numbers which are not systematically related to the purpose for the output or to the processes involved, give no indication of how effectively the work was done. When no attempt is made to incorporate input measures, efficiency is not determined. If processes are ignored, actual management effectiveness cannot be estimated. For all their limitations, however, throughput measures do represent a foundation for thinking about performance measurement in terms of results rather than the more traditional inputs or costs. Throughput measures may be useful if they can be easily compared with past performance or with similar units elsewhere. In this way they can be used to justify expenditures or to determine budget requirements.

### 2 EFFICIENCY MEASURES

Efficiency measures are also product oriented. They differ from throughput measures in that some indica-

tion is given of the resources necessary to produce that output. Cost factors can be stated in terms of dollars or man hours. Efficiency measures focus on how economically the resources (inputs) are converted into services or results (outputs). Consequently, they are more useful and have more appeal than throughput measures. The costs involved are often not difficult to obtain because traditionally costs have always been collected for budgeting purposes.

Examples of efficiency measures for garbage collection are as follows.

Tons collected per crew collection hour.

Households serviced per crew collection hour.

Costs per ton collected.

Costs per stop.

Number of people served per truck per week.

The table presented on the following page is an example of such measures.

Efficiency measures may be stated in different ways:

- a as a measurement of unit cost;
- b related to a work standard, and
- c as a measure of utilization of resources.

#### a Unit cost measurement

These are measures of workload performance that are expressed in dollars, e.g. cost of 10,000 gallons of sewage treated, cost per yard of street paved. The reciprocal of these is the measure of productivity, e.g. yards paved per dollar cost.

An extension of unit cost measurement is cost-effectiveness analysis. Some kind of cost-effectiveness analysis is involved in any resource use decision, such as the construction of a road or a bridge or a school. The physical characteristics are specified and an attempt is made to find the least expensive way to satisfy these specifications. Often the specifications have to be adjusted to fit into the budget and the question becomes, 'What is the best bridge (or road or school) that can be built for the money allotted?' Usually some of the specifications can be traded for others at a given budget level. Higher speed of construction may mean less durability; greater elegance of design may sacrifice certain safety features. It is important to know what is being traded and at what cost.

Cost-effectiveness analysis is merely an extension of these basic ideas into other, sometimes more complex, public decision problems. It is an attempt to specify

Level of Service	Crew Size	Productivity Performance Measure				
		\$/Ton Collected	\$/Stop	Tons Collected/ Crew Collection Hour	Households Served/ Crew Collection Hour	No. People Served/ Truck/Week
Curb or Alley Once-a-week	1 man	8.44	.19	2.2	100.9	7763
	2 men	11.82	.22	2.1	109.6	7517
	3 men	10.34	.38	3.8	99.2	7060
Curb or Alley Twice-a-week	1 man	12.71	.38	1.3	88.5	3636
	3 men	13.65	.45	3.0	199.5	6316
Backyard Once-a-week	2 men	18.00	.31	1.2	71.7	5130

what is to be done in order to examine systematically the alternative ways of doing it. Cost effectiveness analysis is useful in answering questions about how to achieve a specified set of objectives at the least cost, or how to get the most effect from a given set of resources. It can be used to help answer the following types of questions. Can alternative activities be designed to achieve the same results at lower cost? Might some changes be made in the procedure to make it operate more efficiently without additional expense?

#### b Work standards

The concept of work standards involves the establishment of a set of quantities that should be achieved on the job. Standards are determined by establishing the best procedure for the operation and the resources necessary to carry out that activity. The time for the job is observed and measured under good conditions. Thereafter, whenever a manager undertakes a job of that type he will record the time, equipment, materials, etc. that were used and relate these to the standards set for the job.

Setting standards is not always a simple procedure. Certain problems may have to be overcome during the process, depending upon the measurement intended. These include:

- i realistic and yet somewhat demanding standards must be determined if they are to be used for performance measurement;
- ii methods, equipment, facilities and qualifications must be specified or standards are relatively meaningless;
- iii the real needs of the client (either the public or other managers) must be determined and defined before effective objectives can be determined;

iv records must be kept of both output and costs for most measures;

v details of projects or tasks to be completed must be completely specified and any discrepancies noted after completion;

vi levels of service must be identified and accurately measured; and

vii accurate measures of quality must be available and the quality must be controlled.

In spite of the above requirements, standard setting is feasible in many areas of production and service delivery and, in some cases, is almost mandatory for an effective operation.

Work standards can be used in areas where job processes, procedures and outputs are routine, where jobs are repeated frequently and where the quality of the output does not differ significantly. Many routine clerical tasks are amenable to the application of work standards as measures of productivity. Work standards can also be applied to many of the activities of public works departments, parks and recreation departments, etc. In this area the Ministry of Transportation and Communications of Ontario has implemented a Municipal Maintenance Management System in Ontario municipalities. The M.M.M.S. is a performance oriented management system that encompasses program development, budget preparation and evaluation, and work and fiscal expenditure control for road related services. Activities are broken down into definable and measurable units so that men and material requirements can be calculated. When a service level is chosen, accurate costs can be computed and allocated accordingly. Thereafter, any contemplated increase in the level of service offered can have an incremental cost associated with it.

A simplified example would be machine sweeping of

<sup>1</sup> 74, p. 8.



downtown roads and residential streets. Council, or a committee of council, may have set a standard that curbs and gutters shall be cleaned every three weeks between April 1 and November 30th. This operation could be broken down into the following categories for one day's sweeping.

Manpower (one operator at \$6.00 per hour for 8 hours)	= \$ 48.00
Machinery (one sweeper at \$12.00 per hour for 8 hours)	= \$ 96.00
Materials (800 gallons of water per day at 36c per 1000 gallons)	= \$ .28
Supervision (supervisors may charge their time to this account or a more general account, e.g. \$8.00 per hour for 2 hours)	= \$ 16.00
Total cost of sweeping per day	= \$160.28
Number of miles swept	= 20
Unit cost per mile of street swept	= \$ 8.01

These figures are usually aggregated over a period of two weeks or one month and compared against the budgeted values. The information sheets at that time give actual unit cost and standard unit cost. The breakdown of the figures can vary, for example, where labour is used intensively it may be useful to break down the labour cost per mile, etc.

The Government's objective for the MMMS was to have all or a high percentage of Ontario municipalities involved, so that comparisons could be made between them under similar circumstances. Where differences existed, these could be defined.

One of the problems with this particular efficiency measurement system is that it is very time consuming and requires a good deal of continuous paper work. Small municipalities may find this a particular hardship. It also may constrain the initiative to improve performance, since a standard can easily become an upper limit. Allocation of costs to different programs is also difficult and financial control problems frequently ensue.

The benefits that accrue are that budgeting is supposedly facilitated and staff and workload levels can be determined and allocated.<sup>2</sup> Standards establish expectations of what is to be achieved during the workday and, therefore, they help in organizing the people and equipment.

Municipalities also use standards in other ways. Standards that affect output, but which are not directly related to work performance, include specifications in such areas as the determination of the eligibility of welfare recipients or the adequacy of low cost housing. Most departments could use standards, at least to some extent, but motivational problems may accompany their use since they involve almost a mechanical approach to human resource management.

### c Utilization of resources

It may also be possible to measure the efficient use of resources by distinguishing between productive work time (when employee or machine time is spent on work

tasks that contribute directly to the desired outputs), and non-productive work time (when time is spent on work tasks which are either unnecessary or marginally useful in achieving the desired outputs), or idle time (when employees or machines are not engaged in assigned work tasks).<sup>3</sup> Increased efficiency or productivity is obviously related to reducing the non-productive or idle time of the resources, e.g. when buses have empty seats, when libraries are poorly used, when equipment is in the repair shops or when skilled personnel are standing around. Information is needed to determine what output level might be accomplished and what level is presently being achieved. Standards can be useful in analyzing the difference between actual and ideal performance when trying to determine and reduce the barriers that prevent the more productive level being reached.

The table overleaf is an example of the use of standards in combination with utilization measures.

Measures of efficiency can be helpful in making choices between municipally and privately operated services, and between new equipment and older equipment with higher manpower demands. As with throughput measures, efficiency measures are more useful over time and when they can be compared with other operations. This aspect, however, has been criticized because of the dangers involved in assuming that measures are similar when, in fact, aspects such as the environment and accounting methods may differ.

One of the main criticisms levelled at throughput and efficiency measures is that they largely ignore the *quality* aspect of the impact of the product on the environment. An example of this is the following. An education process can be very efficient in terms of output of students through the system who receive diplomas. This output criterion, however, does not measure education in terms of learning and improved ability to understand and prosper because of the education experience. An operation can be very efficient but this does not necessarily mean that the service it provides is of high quality.

Another example of this problem is the following.

A government can almost overnight significantly increase its efficiency in terms of 'the number of tons of garbage collected per man-hour' by shifting from backdoor to curbside collection. Of course in doing so, the level of service to the citizen has been decreased. The burden of moving the garbage from the backdoor to the curb has merely been shifted from the government employee to the citizen. Thus, it seems overly generous to label such increases in 'tons per man-year' as an increase in government productivity. Such examples abound in government services.<sup>5</sup>

2 Where a work force carries out one or two reasonably routine activities, financial control is facilitated by such a system, as accounting for personnel resources is reasonably straightforward. Where a number of parallel, diverse activities are being carried out by a work force the control problem is considerably more complex.

3 69, p. 3.

4 69, p. 3.

5 55, p. 23.

Standard Description	Unit Measure	Number Units Completed	Standard Per Unit	Actual Measured Hours	Standard Hours	Manpower Utilization (%)
1. Type and file master index cards	each card filed	9,613	.05	520	480.7	93
2. Type and file crime reports	each report filed	3,261	.32	1,247	1,043.5	84
3. Conduct name/location search	each request received	10,431	.08	911	834.5	94
4. Process arrest records	each record filed	1,042	.77	853	802.3	94
5. Update teletype information	each entry completed	5,403	.03	153	162.1	106
6. Maintain Warrent files	each warrant received	315	.23	75	72.5	97
7. Miscellaneous	each day completed	30	10.2	407	306	75
<i>TOTAL</i>				4,166	3,701.6	89

Consequently, although a service may be more efficient the quality or the level of service may suffer.<sup>6</sup> In some cases the 'real' efficiency of the operation may actually decrease. Shifting the garbage pick up to the curbside, for example, may not always be less expensive. In one study it was found that,

... in some cases, higher levels of service actually cost less than a lower level service. For example, one city picks up the trash three times a week from the backyard for \$2.66 per month for each household. A county in the same metropolitan area picks up only once a week, and from the front curb — so that residents have to carry the containers to the curb themselves — at a cost of \$3.60 per month for each household, or 35 percent more costly than its neighbouring jurisdiction's higher level of service.<sup>7</sup>

Consequently, quality can be reduced without an associated decrease in costs. The ideal, of course, is to increase efficiency so that the level of service is improved without additional resources. In order to accomplish this, measures are needed of the quality of the product or service being offered. These are commonly called effectiveness measures.

### 3 EFFECTIVENESS MEASURES

Throughput and efficiency measures determine the quantity of output and may relate that quantity to the cost of production. Such measures tend to be task related. Effectiveness measures are still output oriented but they measure the quality of the impact and not just the quantity. Specifically, effectiveness measures are

more results oriented. They focus on how well a task is accomplished without particular regard for the cost of the output. More than the previous measures, effectiveness measures attempt to determine the worth and value of the output. They indicate whether municipal activities are meeting citizens needs or are in the best public interest. They do this by measuring the effect of the activity rather than the activity itself.

This adds a new dimension to measurement because efficiency measures give no indication of the impact of the output as it relates to the basic purpose of the activity. Measuring tons of snow removed, or comparing and analyzing the cost of picking up that snow will not determine whether or not the streets are clear. Similarly, analysis of the cost of garbage collection or of road mending will not determine if the streets are clean or the roads are free of bumps.

Effectiveness measures set out to measure the extent to which the purpose of an activity is being achieved. Consequently, measures of this type may indicate how successfully a municipality is pursuing its goals and objectives. While effectiveness measures are more complex and subjective than throughput or efficiency measures they are of far more value to the planners and strategists who make the decisions regarding the direction of municipal efforts, e.g. in deciding which roads to mend rather than in measuring the productivity of the mending process.

Although they may be qualitatively oriented, most attempts at effectiveness measurement try to express the measure in quantitative terms where possible. In these cases, the measure may be expressed as a percentage, perhaps of an 'ideal' situation, e.g. percent of crimes solved or illnesses successfully treated, or as a propor-

<sup>6</sup> Standards may also be used to measure quality of output. Of course, internal quality control is not a direct measure of impact.  
<sup>7</sup> *Ibid.*, p. 2.



tion, e.g. robberies per 10,000 homes. They can also be expressed in more general quantitative ways, e.g. response time to fires, transit time from location to location or the frequency with which streets are cleaned. Users have found that a heavy emphasis on quantification tends to restrict the latitude of effectiveness measures.

There are basically three approaches to measuring service effectiveness:

- a expert judgement;
- b client or user response; and
- c goal and objective achievement.

#### a Expert judgement

This approach involves training a civic employee to evaluate a service delivered by a department in which he is not employed. For example, specially trained inspectors might spend a portion of their time surveying and evaluating the cleanliness of streets, on a scale from very clean to very littered, in each neighbourhood of the municipality. Another portion of his time might be spent measuring the quality of road surfaces using a 'bumpiness' index. In any such evaluation it is necessary that those who will be affected by actions taken as a result of the judgement see the evaluations as being fairly applied by all inspectors, reflective of the needs of the clients and indicative of the service being supplied.

Another portion of an inspector's time might be spent evaluating traffic congestion, as judged by the duration of time and severity of delay in travelling between different points in the municipality along major routes. Information of this kind could very well result in changes in policy and resource allocation for various departments.

#### b Client or user response

Managers can obtain feedback from citizens, or from other managers in the case of a support service, about the quality of the service they provide. Each of these categories will be discussed separately.

##### CITIZEN RESPONSE

Citizen feedback is possible through information centres or through citizen surveys.

##### Information Centres

Citizen input can be obtained by setting up a complaint or information centre where citizens may phone in and comment on any facet of municipal service that they feel deserves attention. Consistent or frequent complaints can be investigated and evaluated as a basis for remedial action. This is a direct and inexpensive way of obtaining feedback from those who are most affected by the services supplied.

##### Citizen Surveys

Citizen surveys are considered to be the most popular vehicle for measuring the effectiveness of municipal activities. Proponents argue that they can be a valuable and accurate substitute in service areas that are not amenable to more quantitative measures. In fact, mar-

ket researchers point out that governments are the fastest growing users of their services.

The following is an example of indicators of citizen evaluation that were used in a survey to evaluate a police force.

- i How fast respondents thought police serving their neighbourhood responded to calls for service.
- ii Whether respondents thought crime in the neighbourhood was rising, about the same, or decreasing.
- iii Whether respondents thought that police-community relations were outstanding, good, adequate, inadequate, or very poor.
- iv Whether respondents thought that the job performed by police serving their neighbourhood was outstanding, good, adequate, or very poor.
- v Whether respondents thought that police services were equally available to all in their community.<sup>8</sup>

Citizen input (in whatever form) is valuable as it can provide data for council and administration on such aspects of management as:

- i the degree to which objectives are being met;
- ii citizen awareness of and satisfaction with the quality of municipal services or programs;
- iii the extent to which municipal facilities and services are used and by whom (in demographic, psychographic and socio-economic groups);
- iv the reasons why specific services are liked, disliked or not used;
- v the possible adverse effects or influences of municipal facilities or services on certain sections of the community;
- vi the demand for new or increased services; and
- vii community attitudes toward major decisions which have been made or which might be made.

There are certain pros and cons of accepting systematic citizen input into political decision-making.

##### Pros

- i Systematic surveys give a more representative view of citizen feelings than do meetings with minority pressure groups. Citizens are coming to realize that while small vocal groups can have considerable political impact there is no certainty that the group represents a sizeable majority of the population. Surveys have the advantage of using random sampling methods to try and obtain the most accurate indication of the feelings of the majority.
- ii For many measures it is the only practical choice.
- iii Involving citizens in decision-making can lead to meaningful dialogue and citizens can also feel that they are participating in the community.

##### Cons

Some of the problems associated with systematic citizen

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8 55, p. 52.

input and effectiveness measures in general are as follows.

- i Properly conducted surveys with trained observers and proper sample sizes are expensive. To be most useful, surveys need to be designed so that they can be repeated at standard intervals. This process can be very costly for a smaller municipality.
- ii If the survey is not properly supervised and designed, validity and reliability can be a problem when trying to get accurate answers. Also certain groups of people may be more interested and articulate. This could bias the results.
- iii Citizens may not be sufficiently well informed to give an overall judgement; for instance, individuals may not be aware of the operating costs of providing the service, of the alternative services that could be made available to them, or of possible improvements in the present service, and they may have little idea of how the level of service they are receiving compares with the service in other municipalities. Managers cannot rely on citizen surveys for answers or for direction for these reasons. With their knowledge of choices and resources, and with their long-term perspectives, municipal managers are in a better position to judge long-term pay-offs from particular decisions. Control must, of course, remain with council or else municipal organizations could be operating to meet the needs of administrators rather than those of the public.

Although citizen input is expensive, recent increases in citizen awareness, focusing on municipal government services, indicate that more municipalities will find subjective indicators to be useful in the future.

#### RESPONSES TO SUPPORT SERVICES

Reactions of managers to support services are far easier to obtain than responses of citizens. Such measures can come in the form of joint review and planning meetings, in the form of regular surveys, or in the form of complaints and suggestions. Joint goal and objective setting can facilitate the measurement of support service effectiveness and corporate planning sessions can help in defining targets in this area.

The measurement of support services will be discussed under the next section on goals and objectives, and again under the section on management processes later in this paper.

#### c Goal and objective achievement

If municipal effectiveness means the extent to which the municipal organization fulfills its purpose, then the setting and achievement of objectives is a crucial form of measurement.

The first step in goal and objective determination is to clearly determine the purpose of any service, 'What is to be accomplished?' Then the ongoing and specific activities which are to be undertaken to fulfill the purpose or aim are established and suitable measures are identified. Performance in production or in the delivery of a

service can, of course, be measured without setting objectives. Objectives, however, add a dimension of planning and control to the improvement of performance; without carefully determined goals and objectives effectiveness is hard to estimate.

To an extent, when a manager sets an objective, the achievement of that objective within a stated time and with a defined need for financial, human or material resources, is a measurement of performance. If the objectives are determined carefully enough, performance can be measured in most areas of municipal activity. Objectives may be of various kinds;

- i objectives to complete a task, e.g. to provide a certain service, by a particular date;
- ii objectives to provide a particular level of service or quality or quantity of product;
- iii objectives to produce the same product or service at a lower cost;
- iv objectives to meet or improve upon a particular standard of production or service within a certain time frame;
- v objectives to produce a service or product which is more satisfactory to the person or people receiving the service;
- vi objectives to increase the output of individuals involved in production; and
- vii objectives to provide a satisfactory level of service at a lower cost.

These objectives all involve the actual product or service directly, and the degree of achievement of such objectives gives a good indication of the efficiency and/or effectiveness of the managers and employees directly concerned with providing the service. Setting objectives for output activities is not without its difficulties, however; it has not been successfully accomplished by many municipalities. Some of the problems that have been identified are as follows.

- i The absence of clear statements of measurable objectives.
- ii Objectives which are too broadly stated.
- iii Unrealistic or unachievable objectives.
- iv Partial or inaccurate statements of objectives.
- v Objectives which are too detailed and which cover routine activities — thus consuming unnecessary time.<sup>9</sup>

Foremost among institutions that have contributed to the development of performance effectiveness measures for local government is the Urban Institute of Washington, D.C. During its short history the Urban Institute has produced an extensive body of literature covering all aspects of performance measurement although its main thrust has been the development of measures of the effectiveness of services as opposed to efficiency.

The Institute staff have developed some extremely useful measures of effectiveness as well as subjective evaluation measures and social indicators. The Institute has been particularly active in developing techniques to measure the effectiveness of the delivery of such services

<sup>9</sup> 12, p. 35.



as solid waste collection, recreation, local transportation, and crime and fire control. This has been accomplished primarily by compiling the reports of literally hundreds of North American cities on their respective attempts at a wide variety of productivity improvement projects.

The International City Management Association (ICMA), also of Washington, D.C., has recently increased its efforts in the performance measurement field because of greatly increased requests for information and assistance regarding this subject from city managers. The ICMA has worked closely with the Urban Institute in the research and development of performance indicators for local governments. These two organizations have co-sponsored several projects including a major project in Nashville-Davidson, Tennessee and St. Petersburg, Florida.

This last mentioned project is particularly noteworthy, since its goal involved the development and testing of practical procedures whereby local governments can better measure the effectiveness and productivity of a number of the major government services. The emphasis was on developing measures of citizen responses to services rather than workload measurements. An attempt was made to obtain citizen reactions to many city services such as fire protection, solid waste collection and disposal, water supply, parks and recreation, library and transportation functions. Measures were established, as a result of those surveys, which seemed to supply relevant information regarding the effectiveness of the services.<sup>10</sup>

## SUMMARY

As can be seen, there are many approaches to measuring municipal product or service output. These should not be seen as being mutually exclusive but should be regarded as being complementary, all joining together to produce a performance picture. It seems clear that taken alone, throughput measures are not very meaningful. Efficiency and effectiveness measures are necessary for a realistic program or performance evaluation, but they are also more costly and time consuming. Managers attempting to measure results should look reflectively at the measurement activity itself in order to choose the output measurement process which is most meaningful for management improvement.

This suggests that performance measurement must begin by determining the type of management information needed at any particular management level before the choice of methodology is made. The methodology chosen will reflect what the output measurement process is to achieve. Effective management is the first consideration and the measurement system is designed as an integral supporting part of the management system.

From the earlier discussion of the factors contributing to effective management this means determining the purpose of the activity, determining activity reference levels or standards of service quality, determining the adequacy of the services provided, setting objectives with performance expectations and targets for activity levels, organizing the resources, undertaking the activ-

ity, monitoring the progress and adjusting where appropriate. It is apparent that all of the output oriented measures can be of use in this process, each adding a different dimension, each being more or less useful at a different stage in the management process or in the organizational hierarchy.

It is not difficult to see, however, that output measures alone do not provide all the information needed at all levels. If the purpose is to measure *management* effectiveness rather than environmental impacts and costs, then output measures are not the best tools. It is true that results count and this has been the spur for output measurement rather than concentrating on purely internal measures. However, by themselves, output measures are inadequate to fill the management need for reliable performance information. Some of the reasons are as follows.

### 1 The measuring device may become an end in itself.

This is a problem, particularly when the measure does not reflect the basic purpose of the activity. Once a measurement system is established it becomes the cue to guide productive behaviour during the accomplishment of that task. This is certainly the case if the reward system is tied to the measure. Consequently, it is very important that measures reflect the purpose of the behaviour being measured. There are many instances where this is not the case — where improving behaviour related to the measurement does not improve the service. The example given earlier of the increase in efficiency of the garbage crew, which occurred as a result of a decrease in effectiveness, is one such example. The efficiency of the garbage crew must be described in terms that reflect the reason for its existence. This is a very simple concept but it is often overlooked in the establishment of the measurement or evaluative aspect of a management system.

A more blatant example of this type of measurement problem is the case in which police output was measured by the miles driven by the officer. As a consequence of this measure policemen spent their shifts driving from one end of town to the other.

Using output measures or control devices may be dysfunctional if they are relatively simple to fake. Most measures can be faked and a prime instance is the case in which garbage crews added water to their loads when they knew they were being assessed on the tons of garbage collected. The use of measurement as a control device may actually serve to eliminate its managerial usefulness.

### 2 It is sometimes difficult to relate specific inputs to outputs.

On all but the simplest jobs it is not a straightforward process to assign particular resources to a specific output. Some authors argue that the answer to this problem is to use multifactor productivity ratios whereby the relative contributions of labour and capital are determined and assigned to one task. In some cases this can

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10 Publications from these and other institutions are included in the bibliography, Appendix II.

be complicated, for instance, where both policemen and detection equipment contribute to criminal apprehension. There is a problem involved in determining the relative effectiveness of each.<sup>11</sup>

### 3 It is often difficult to assign specific responsibility for each activity.

Output can be directly assigned to a specific manager only at the lowest levels of the hierarchy. Many programs involve co-ordination and input from different sections or departments. Very few managers act entirely alone but rely on other operating units and support services to supply necessary resources and information. The way in which the various parts of an organization are integrated will often determine the overall effectiveness of an operation and will influence output. In such cases, the measurement of output in isolation from management processes provides little useful information.

Uncontrollable factors, such as the weather, can influence work load performance and this can create problems. Output measures attempt to identify and measure the controllable aspects of a task or service. In many cases, however, more than one manager will have authority over the controllable aspects. In these cases, responsibility for the outcome cannot be directly applied.

### 4 Output measures are more suitable for tactical decisions than for strategic planning decisions.

Managers at higher levels of the organization need different types of information than those at lower levels. Measuring the efficiency and effectiveness of an activity may not be the type of information that will indicate whether or not that activity should be undertaken in the first place. A day care centre, for instance, may be operated most efficiently by the staff, measured in terms of inputs and outputs. The clients may be delighted with the service where previously no such facility existed. Efficiency and output measures, however, even though they are carefully made, will not tell the council whether or not the municipality should be in the business of providing day care centres, or to what extent, relative to other social service programs. Also, these measures will not help to assess whether the concept of a day care centre is the best approach to solving the particular community problem. Consequently, day care output measures are more useful and meaningful to day care centre managers than to commissioners of community services or to councillors. This example is typical of many municipal decision-making situations and indi-

cates how the type of information needed varies at different organizational levels. By thinking purely in terms of output information, managers can lose touch with the meaning of the services they supply.

### 5 Output measures do not measure the performance of managers at different management levels.

The responsibility for output tasks becomes diffused throughout the hierarchy. The city engineer is, of course, ultimately responsible to council for shoddy vehicle or building maintenance or for a badly laid sewer. Output measures will not, however, identify the managerial level at which corrective action is necessary. In addition, output measures (or results) do not identify the poor manager, whose inefficiencies and ineptitudes are covered up by his subordinates or by input from other managers. There is no question that whole levels of unnecessary management exist in many municipal departments but output measures will not illuminate such problems.

It is well worth repeating that output measures will not measure strategies, assess lost opportunities, or in general identify and evaluate performance levels at the higher end of the hierarchy. For instance, they will not determine how effectively and efficiently the senior management team is operating or whether a municipality is making the right decisions at the corporate level. A poorly motivated and managed senior management team can, however, have drastic implications for both the efficiency and effectiveness of a municipal organization.

It has been the experience of this Project and a crucial point in this report that *the major problems in measuring performance and in attaining effectiveness and efficiency, arise in management areas which are less directly related to production and service delivery*. Certainly, this is where a great deal of inefficiency and ineffectiveness exists. Local governments may have this problem to a lesser extent than other levels of government, but the consequences are still major ones. It is true that performance is difficult to measure in upper level management, in the interface between administration and council, and in the design and delivery of internal support services. However, both measurement and management improvement are certainly possible in these areas. Unfortunately, the setting of clear objectives and the measurement of efficiency and effectiveness in higher levels of management have not been particularly successful to date.

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11 55, p. 26.

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## Part IV





## Fiscally Oriented Approaches

Probably the best way to begin a discussion of fiscally oriented approaches to measurement is to contrast them with the output measures just discussed. A short review of output measures should facilitate that comparison.

Output measures indicate the quantity or level of service, the cost of the service, and the degree to which the service meets citizens' needs. They stem from a recognition that an organization should be evaluated, at least in part, in terms of its impact upon its environment. As compared to input measures, output or results oriented measures are far more useful in informing managers whether or not they are doing the right thing. They have their weaknesses, however, in that:

- 1 they tell managers nothing about the processes which occur within the organization and do not supply a basis for evaluating those processes;
- 2 they do not, by themselves, identify which service program, or approach to supplying a service, best meets community needs;
- 3 they provide little flexibility for the consideration of environmental implications which may determine long-range costs or benefits of a service, and frequently do not even include the impact of immediate costs. For instance, in client response to service, the client is frequently unaware of either relative costs or potential alternatives; and
- 4 while they can measure perceptions of change and indicate where change is needed, they cannot identify why an output has changed or indicate how the organization itself can be modified to create change where necessary.

Fiscally oriented measures have the potential to combat at least some of those weaknesses. They are more long-term, planning oriented measures with both the costs and benefits of a service or program expressed in comparable monetary terms wherever possible. Not only can the costs and benefits of a program be related to each other, but the relative costs and benefits of different programs or of different approaches to supplying a service are available for analysis.

Although they are tied into program cost/benefit analysis the particular strength of fiscally oriented measures is in the relating of costs to output; they draw the accounting system into the management process and, ideally, provide managers with planning and evaluation tools. As part of this management process, fiscally oriented measures try to relate planning, activity programs, efficiency measures and impacts. By relating

these various aspects of management they provide a vehicle for the allocation of resources. Thus fiscal measures provide the potential to bring performance evaluation into the management system, not simply as a measure of inputs, but as a measure of process efficiency and program effectiveness.

These measures are linked to resource allocation through the medium of the budgetary process. Since a budget is a requirement in any organization and has become a particularly important aspect of local government management, the budget process has been the focus of most fiscal approaches to measurement. With the growing awareness of organizational efficiency, the development of the application of systems theory to municipal organizations, and the associated need to rationalize decision-making in terms of outputs, it was realized that the budgetary process that existed, i.e. primarily measuring inputs, did not provide the right feedback or information for guiding the decisions of the council or the administration.

Until the 1950's the standard budgetary process was a line-by-line approach in which the input funds were identified and changes in unit budgets were made incrementally. Incremental budgeting simplified the manager's yearly task by focussing mainly on the small part of the budget which was not committed by previous programs. Thus, the greater part of the budget, which included the ongoing programs involving maintenance and construction of basic physical services, ongoing social services, and long-term projects, was a stable base which remained substantially the same from year to year. Ongoing programs were not re-examined because costs alone did not provide a sufficient basis for that examination and, as a result, attention focussed on increases and decreases which departed from the budget of the previous year.

The incremental budgeting technique, more a 'line of least resistance' approach than a systematic technique, has been as much criticized as it has been widely used. A number of management surveys in the early 1950's suggested a general dissatisfaction with line item budgeting and many complaints were registered. Typical of the problems that were experienced with line budgeting are the following.

- 1 The line item budget, in most cases, provided a record of expenditure which could be readily understood only by its authors and by personnel in the finance department responsible for its implementation.

- 2 It was difficult to understand how much was being spent on which activities.
- 3 It was very difficult to discover which administrators were accountable for which portion of the budget. This was particularly true for the middle and lower level managers.
- 4 It provided little, if any, of the information necessary to make intelligent spending decisions. Therefore, it did not encourage decision-makers to concentrate on questions such as the size of programs required, the relative importance of programs, etc.
- 5 It had little to contribute as an aid to planning.
- 6 It acted to limit participation of the elected level in the broader planning decisions which should have been a necessary part of the budget process.
- 7 It could often help to alienate the administrator who was caught between finance department demands for detailed breakdowns of expenditure and the demands of the elected level for more clarity in the overall picture. Unable to provide convincing details by project or activity to an elected representative, who was at times under pressure to obtain this specific information, the administrator was forced to react defensively, and alienation between the two was often the result. This could seriously affect the outcome of future budget deliberations and lead to the end of rational budget debate.
- 8 The line item budget made great time demands but often did not encourage optimum resource allocation. With department heads (who were anxious to ensure adequate resources for necessary and desirable programs) meeting with elected officials (who were equally anxious to hold the line on continuing increases) the budget process involved confrontations, time consuming justifications, re-calculations, and lengthy debates ending, at times, in a flurry of last minute arbitrary decisions. This resulted in decisions being based on the cost factor alone with little or no consideration being given to the purpose of the service being supplied or to the benefits of that service.
- 9 The line item budget could also be criticized for its failure to consider expenditures as a whole, its inherent lack of co-ordination in budgeting resources, and the wasteful prolonging of obsolete and ineffective or inefficient programs.

Various attempts have been made over the past twenty years to modify the budget process to integrate more meaningfully with managers' ongoing needs for financial information. These different attempts can be described under three general headings.

- 1 Performance budgeting;
- 2 Planning, programming budgeting; and
- 3 Zero based budgeting.

Each of these approaches will be discussed in some detail.

## 1 PERFORMANCE BUDGETING

Performance budgeting was introduced into govern-

ment over twenty years ago and has since been superseded by a number of other approaches, e.g. planning, programming budgeting and management by objectives. Though its popularity with public service administrators has diminished over time, its basic elements have been retained by more recent, elaborate and comprehensive systems.

### STRENGTHS

Performance budgeting in the United States grew out of an interest in performance measurement. It was formally recognized and became popular as a working management concept in government as a result of the 1949 Hoover Commission. The purpose of this federal body was to recommend efficiencies and improvements in the formulation of federal budgets. The commission's chief recommendation was that the adoption of the budget should be based on functional activities and programs and that it should be treated as a 'performance budget' in which an increased accountability for efficient execution of programs was to be delegated to all levels of management. One of the main benefits cited for this new system was an improvement in the quality of decision-making by both administrators and elected officials.

This improvement would be achieved through the development and implementation of a feedback system involving the setting of throughput and efficiency measures for the delivery of services. This idea, relatively new at the time, resulted from a greater awareness of the budget as both a powerful control instrument and as an expression of political commitment. With this growing awareness, the old style line item budget rapidly fell into disrepute, at least at the federal level. With the increase in use of performance budgeting in the 1950's there was a strong feeling that the problems encountered with the old style line item budget would be rectified.

Performance budgeting differed from the traditional line item budget in that the main thrust of performance budgeting was in the emphasis placed on accountability and achievement. Thus, one of the most important aspects attributed to the system was its ability, where properly implemented, to promote a sense of responsibility and concern for achievement on the part of administrators. It was intended that performance budgeting should focus on the delivery of services and on work programs and activities, accurately accounting for operating requirements in terms of men, money and materials for specific functions, and in all cases directly identifying responsibility for accomplishment. Simply stated, it was supposed to set forth what was to be done, who was responsible for doing it, and what the costs were — both past and projected.

The following represent some of the reasons why performance budgeting was considered an improvement over line item budgeting.

- a It provided for tighter control over expenditures by the elected level.
- b It helped to improve planning.
- c It made decision-making a simpler task which relied more on fact than guesswork.



- d It helped to decentralize decision-making, placing authority at the level of responsibility.
- e It also served as a useful communications device, helping to improve relations with interested citizens' groups and others interested in how municipal funds were being spent. Clear statements of where public money was going and what was being accomplished with that money also served to lessen the suspicions and the distance which often separated the views of citizens vis a vis council.
- f It allowed for a closer examination of managerial efficiency in executing municipal programs.

Briefly, the main steps involved in implementing performance budgeting are as follows.

- a The development of a functional classification of municipal services performed by the work unit involved. A sample breakdown might look like the following;

General function	Transportation
Department	Public Works
Activity (Program)	Road Design and Construction Branch
Sub activity (cost accounting and work unit description for all levels)	Installation

- b The specification of work unit plans of action for the coming year, detailing the scope and estimated cost of proposed work.
- c The specification of personnel requirements either through determination of total man hour needs or unit cost accounting.
- d The establishment of a relationship between the volume of work performed and the manpower used to achieve that volume, using measures of output and measures of employee time.
- e The implementation, through a cost accounting function, of a performance reporting system which will indicate trends in program accomplishment and resource usage. The purpose of the performance reporting system is to determine whether or not the annual departmental work programs are being accomplished in an efficient and timely manner and to highlight problem areas.

The cost accounting function is a key factor in a performance budgeting system. Briefly, the system is organized such that costs are accumulated by major work activities at the department level. Cost information is then further broken down in manpower and managerial categories for subdepartmental levels. Costs are, as far as possible, related to workload, e.g. dollars per ton of garbage removed, dollars per ton of asphalt laid. These standards can then be used to evaluate performance. Typical feedback procedures resulting from cost ac-

counting data involve monthly performance budget print-outs of throughput, cost figures, and the combination of these into efficiency measures.

#### WEAKNESSES

The need for an elaborate accounting system has been pinpointed as one of the disadvantages of performance budgeting. Critics argue that unless an elaborate, expensive, cost accounting system is included and related to managerial responsibility, performance budgeting loses its significance, either through a lack of accuracy in performance feedback, or through a lack of depth and completeness in a system which should provide useful performance measurement data for all levels of management. Others argue that a cost accounting system creates an overabundance of data which are tailored to very few people, used by even fewer, and amounts to a proliferation of paper and an unjustifiable need for more manpower to produce data.

Many of the criticisms of performance budgeting were not aimed at the concept of performance budgeting but at the management of the back up accounting system. Other criticisms were that it was not always easy to define costs, quantities and work units. The concept itself, however, was well received. Even though performance budgeting as a system has lost popularity over the years, the concepts behind it have not been forgotten; they have been updated, refined and incorporated into more relevant systems. Components such as cost accounting systems, quantified work measures, streamlined budget processes and increased program accountability are still in wide use today.

## 2 PLANNING, PROGRAMMING BUDGETING

The 1960's saw a tremendous increase in activity in the area of budgetary reform in both business and government. At the forefront of these reforms was a system called the planning, programming budgeting<sup>1</sup> (PPB) system. This was a popular successor to performance budgeting and it developed and incorporated many of the components of the earlier system.

PPB is a system designed to help managers to attain the objectives of the company through a better selection of alternatives for the allocation of resources. Its purpose is to develop and present information in a meaningful way, giving the full implications — costs and benefits — of each of the alternatives being considered. It represents a further attempt at rationalizing decision-making, by trying to minimize the amount of fragmented, incremental and last minute planning and budgeting occurring in government organizations.

The PPB system has been described as follows.

Planning — assessing the community needs, setting objectives and choosing the means of attaining them from among the available alternatives.

1 PPB also gave rise to a number of related but simplified or modified budgeting systems such as program budgeting. Program budgeting is sometimes used interchangeably with PPB. For the purposes of this paper, however, program budgeting denotes a budgeting system which emphasizes a program structure but does not include the multi-year perspective or cost/benefit analysis of PPB.

Programming — organizing and controlling specific courses of action in relation to the objectives they service and presenting them in a performance and resource use plan over a period of years.

Budgeting — translating planning and programming decisions into specific financial plans for a relatively short period of time (one year).

System — integrating, checking and reviewing all planning, programming and budgeting decisions within a consistent framework of general management.<sup>2</sup>

It can be seen that the PPB system expands the scope of the budgeting process from the simple financial control role adopted by the line item budget. Under PPB the budget becomes an integral part of the total management system. Novick<sup>3</sup> has isolated ten major distinctive features of a management system which are incorporated by PPB. These are as follows.

- a Definition of an organization's objectives as specifically as possible.
- b Determination of programs, including possible alternatives, to achieve the stated objectives.
- c Identification of major issues to be resolved in the formulation of objectives and/or the development of programs.
- d Analysis of programs and their alternatives in terms of probable outcomes and both direct and indirect costs.
- e An annual cycle with appropriate subdivisions for the planning, programming and budgeting steps to ensure an ordered approach and to make appropriate amounts of time available for analysis and decision-making at all levels of management.
- f Development of the analytical tools necessary for measuring costs and benefits.
- g Adaptation of existing accounting and statistical reporting systems to provide inputs into planning and programming, as well as providing continuing information on resources used in actions, and on actions taken to implement programs.
- h Recognition of issues and other problems that require more time than is available in the annual cycle so that they can be explicitly identified and set apart from the current period for completion in two or more years, as the subject matter and availability of personnel require.
- i Development each year of a multi-year program and financial plan with full resource allocations in the early years.
- j Continuous re-examination of program results, in

relationship to anticipated costs and outcomes, to determine the need for changes in stated programs and objectives as originally established.

From these ten distinctive features of this total management system, four major components of a PPB system can be identified — a program structure cutting across departmental lines, a multi-year program and financial plan, program analysis, and a revision and updating procedure. Each of these will be explained in some detail.

#### i Program structure

PPB begins with an effort to identify and define the fundamental functions of the particular governmental jurisdiction or the chief purposes for which that governmental unit exists. The goals, or key result areas, where efforts must be directed to achieve those purposes need to be established and the programs required in each goal area determined. This requires grouping by output (or result area) rather than, as in traditional budgeting, by line items of input. Since several departments may contribute to certain programs, the programs cut across departmental boundaries to draw together the information and resources needed by the primary decision-makers.

Analysis, the hallmark of the PPB system, is important at the program structure stage. Examining the organization's goals and objectives, selecting the most effective set of concurrent goals and objectives, identifying programs and program elements, and considering priorities, are all activities to be undertaken at this stage.

An abbreviated example of a PPB program structure for a local government is presented below. It is taken from the fiscal year 1974 budget of Charlotte, North Carolina. Only two category levels are shown here. More levels are needed for a complete program structure which would show the applicable individual activities.<sup>4</sup>

#### CHARLOTTE, NORTH CAROLINA — PROGRAM STRUCTURE

- I Community Development Program
- II Environmental Health and Protection Program  
(examples of second level programs)
  - a Refuse Collection
  - b Refuse Disposal
  - c Street Cleaning
  - d Cemeteries
  - e Water supply and Treatment
  - f Wastewater Collection, Treatment and Disposal
  - g Odor Monitoring and Control
  - h Utilities Administration
  - i Support to Programs Contributing to Environmental Health and Protection
- III Protection of Persons and Property Program
- IV Transportation Program
- V Leisure Time Opportunities Program

2 Department of the Director-General, Greater London Council, *Some Questions and Their Answers on the Greater London Council's Planning Programming, Budgeting System*, (London, England: Greater London Council, April 1972), p. 8.

3 *Id.*, p. 5.

4 More comprehensive examples of program details and process format for the cities of San Diego, California and Lakehead, Illinois, are given in Appendix I.



## VI Policy Formulation and Administration Program

### ii Multi-year program and financial plan

The main product of a PPB system is a comprehensive multi-year (usually five year) program and financial plan, for each agency or department. This plan is periodically and systematically updated. An essential early step is the establishment of performance oriented categories that cover the total work and area of responsibility of each department. This is in contrast to the traditional input oriented municipal budget which focuses on the amount of increase required to meet rises in annual expenses.

The function of the program and financial plan has been well described by Millward:<sup>5</sup>

The Program and Financial Plan (PFP) of each agency is to be a quantitative statement of the agency's programs, according to the various functions that it performs. The PFP should express objectives and planned accomplishments in quantitative physical (output) and finance (input) terms. The intended function is to reveal some of the future year implications of current budget decisions. It should also group programs in such a way as to facilitate comparison among similar programs. As the PFP will assist in pulling together all of the costs associated with decisions to carry out given programs at a given level, it will thus facilitate decision-making. It will also help to force choices among programs, particularly because not all of the potential agency activities can be accomplished with the resources available.

### iii Program analysis

The PPB system of decision-making requires that an organization have a systems analysis capability so that the resource and cost implications of program alternatives, and their expected results or outputs, may be estimated, examined and compared. Indeed, the systematic identification and analysis of alternative ways to achieve the goals and objectives of the organization is one of the basic elements of PPB systems.

A wide range of tools and techniques drawn from the fields of economics, operations research, mathematics and computer sciences are employed in program analysis. These include statistical analysis, gaming, modelling, simulation, operations analysis and econometrics. The terms 'cost/benefit analysis' and 'cost-effectiveness analysis' are often used to describe studies using these tools and techniques.

Quantification is sought, whenever possible, to monitor and measure the value of programs. When quantitative measures are not available, qualitative analysis is undertaken. However, program analysis is not merely the robot-like application of well defined analytical techniques to a predetermined set of alternatives. Often, the analysis of several obvious alternatives will lead the creative analyst and/or decision-maker to the invention of several less obvious but possibly more cost effective alternatives.

### iv Revision and updating procedure

The PPB system must be responsive to the changing

needs of its users and to changing information. Thus a procedure that allows for the revision and updating of resource decisions is essential. Program analysis will often provide new proposals and impetus for change. In the interests of initiative and administrative efficiency, thresholds are often established below which organizational units may make changes in program and financial plans without requiring approval from above.

PPB has its roots in a number of management tools developed in industry as early as the 1920's, but the characteristic form emerged out of a number of concepts and techniques which were introduced during and since World War II. In 1961 the United States Department of Defense, under the tutelage of Robert S. McNamara and a number of recruits from the Rand Corporation, became the first major governmental organization to implement a PPB system. Due to its success, and President Johnson's recognition of the need for a more rational method of public resource allocation, Johnson ordered all U.S. federal agencies to implement the system in August, 1965.

The movement was by no means limited to the United States. Research on, and development of the system, was simultaneously being carried out in the United Kingdom and several other nations. By 1970 almost every Western national government, including that of Canada, had installed a PPB or related system.<sup>6</sup>

Since the mid-sixties numerous local governments have invested heavily in implementing PPB systems. Local governments of all sizes in the United States and England led the way in what became almost a 'bandwagon' effect. Many encountered difficulties which, in retrospect, could have been avoided. Some municipalities moved too quickly, others too slowly, and others acted without adequate understanding or acceptance of the process by administrators and elected representatives. The future benefits of the system were often oversold, resulting in widespread skepticism when difficulties were encountered. As a result, PPB suffered a decline in popularity in the early 1970's. A number of municipalities, including New York City and Philadelphia, while still making use of the PPB concepts, either substantially modified the system or sought out some other budgetary method. Even the U.S. Federal Government decreased its emphasis and reliance on PPB. Despite these well publicized defections, however, PPB and especially its off-shoot, program budgeting, have continued to gain disciples.

When applied to local government, however, PPB does encounter difficulties which are inherent in the system and in organizational change in general, rather than in a faulty implementation. These problems present hurdles that must be overcome if the system is to become fully operational.<sup>7</sup>

5 46, p. 90.

6 Descriptions of the national government PPB experiences of Australia, Austria, Belgium, Canada, the United Kingdom, France, Ireland, Japan and New Zealand are presented in chapters 6-17, of 51.

7 Specific problems associated with the implementation of PPB in the cities of Cincinnati, Los Angeles, and Phoenix are discussed in Appendix 1.

## Technical problems

The first step in a PPB system is the establishment of goals and objectives. In local, as in other levels of government, this is a difficult process presenting a number of problems. To be meaningful, the process must begin at the top with a clear definition of corporate purpose. Goals, which represent direction, and objectives, which represent some broad targets, need to be set or approved by council and based on the feelings of the public as to desired services and priorities. It is hard for a representative body, such as council, to reach a consensus and then to clearly articulate that consensus in the form of corporate goals and objectives.<sup>8</sup> Commitment to corporate approaches and expertise in corporate management are often lacking at the council level and, in fact, the corporate purposes fulfilled by a municipality are often not clear either to councillors or to administrators. Even when the purpose is clear and goals and specific objectives have been identified, it is often not clear how best to achieve them.

Deficiencies in performance measurement systems and difficulties of quantification are only two of the many problems involved with the analysis part of PPB. Local governments often lack the analytical capabilities required to carry out detailed cost/benefit analyses of alternative programs. Many critics of local government PPB have argued that it is unrealistic to expect that a system that was only somewhat successful in a huge, analysis-oriented U.S. federal agency (the Department of Defense), and less successful in other agencies, would find success at the local government level. They suggest that PPB is an extremely well-ordered, complex system, requiring expertise not available in less sophisticated municipal governments.

Another problem is that there is a tradition of functional independence in local government. Support departments, or segments of departments which carry out support functions, are frequently out of touch with the departments they support. Thus, when the finance department wishes to introduce a new financial management system which requires the consensual support and involvement of line managers, neither the integrative mechanisms nor the motives to produce integrated programs are present. To introduce a management system without full line managerial involvement is clearly difficult and can result in alienation between finance and operational managers if the issue is forced. We are not aware of any PPB system which fulfills its management potential for both line and financial staff managers.

### Problems in making the change

Even in jurisdictions where the problems discussed above did not exist or have been substantially overcome, success has not automatically followed. First, there has always been a considerable shortage of trained and motivated personnel available to help local gov-

ernments implement PPB. Second, the political environment (both internal and external) has not always been conducive to the new system. The latter has proven to be the more serious problem.

Besides being merely a change from the old ways of doing things, the PPB system seeks to identify and remove overlapping and redundant activities, to expose the inefficient or ineffective use of resources, and to illuminate the long-range cost implications of proposals with relatively low initial expenses. This exposure can be threatening to insecure managers. Add to this the skepticism generated by gross overestimates of the benefits and underestimates of the time and effort required to have the system operational, and all the ingredients necessary for widespread resistance to the change are present. The changes brought about by a PPB system are bound to jeopardize the vested interests of a number of groups which will often resist and perhaps attempt to sabotage the system in a number of ways.

Any movement towards a PPB system is usually seen by line managers as an attempt by finance people to gain more control over them, and this is met with resistance. Line managers have trouble defining and thinking in terms of programs, particularly those set up across departmental lines. Unless the system is initiated and fully supported by council and top management, it will be seen by line managers as a budgeting control device rather than as a system to aid in the decision-making process. To implement PPB or, in fact, any goal and objective based system, a great deal of rather specific management education is necessary. The LGMP experience indicates that a proactive advisor needs to be continually available at the outset to emphasize the importance of system development, or any complex management improvement initiative will probably fail.

Failure to take these factors into account and to act on them can result in budgets that are program budgets on paper only, with no real PPB systems behind them. There are many such pseudo program budgets for every true PPB system in effect in local government.

Notwithstanding the inherent difficulties in implementing a PPB system and the crippling problems encountered by some municipalities, there have been many notable successes with the system and its offshoot, program budgeting. Municipalities that have developed the process carefully and thoughtfully have found the system to have a number of advantages. Not the least of these is the improved communication and mutual planning process which must develop early in the program.

Several British local governments have been quite successful with PPB. Substantial progress has been made by the Greater London Council and the municipalities of Islington and Liverpool, among others. Rather than limiting budgetary reform to improvements in the budgeting system, a number of British local governments have implemented PPB as a stepping stone to the corporate planning process.

Phoenix, Arizona; Dayton, Ohio; Charlotte, North Carolina; Fort Worth, Texas; and Dubuque, Iowa are five examples of American cities which had success with PPB. More local governments have been joining

8 A good example of a program that was successful in articulating agreed upon community goals is *Goals for Dallas*, described in two case histories listed on the order form on the last page of this publication.



their ranks every year. In Canada, both Calgary and Edmonton have embarked on program budgeting, apparently with some initial success.

A number of Ontario municipalities have moved in the direction of program budgeting by undertaking a more modest type of budgetary reform. This has involved an orientation of the budget toward the grouping of financial allocations by program area, thus focussing attention on programs rather than on line items. Two municipalities involved in such reform are London and Ottawa but neither city has developed the type of co-operation necessary among departments to produce a full fledged program budget, containing clear objectives for each program.

### 3 ZERO BASED BUDGETING

Following the rise and fall of enthusiasm for planning, programming budgeting, the zero based budgeting (ZBB) approach promises to reignite widespread attempts at increasing the effectiveness of the budget process. By mid 1977, zero base budgeting was being used by more than 200 companies, 11 states and a number of local governments in the United States. (In addition, ZBB is to be implemented throughout the U.S. Federal government in the preparation of the 1979 budget.) Known users of the process in Canada thus far include Westinghouse, The Bank of Montreal, McMaster University, and the Canadian Broadcasting Corporation.<sup>9</sup>

The basic concept underlying ZBB is a simple one. It consists of the simultaneous organization-wide examination of all programs in their totality. Under this system each program must compete for funding authorization on the basis of its cost/benefit value compared with all the other programs also in competition for scarce resources. Through an extensive system of review and prioritization, obsolete programs which have continued through inertia or by design, or programs which should no longer be continued at the same level, are highlighted and either cut from the budget or cut back as required. Theoretically, the merits of all programs in all departments are weighed one against the other, a cut-off line is negotiated and programs significantly below the line are dropped.

ZBB, therefore, represents a further attempt to tie the internal financial resource allocation system to program management. In this respect it is similar to the other fiscal approaches. ZBB's basic difference is that there is no incremental portion of the budget. This means that no budgeting decisions are made automatically. For the purposes of this system, programs have no history — only a future.

The earlier attempts at performance budgeting led to the concept of the two-part budget. Under this concept, one part of the budget represented ongoing activities over which senior managers had little control or which involved no change from the previous year. This, essentially, was the base for the following year's budget. The other part of the budget represented those aspects which should be considered by the senior managers at that time. Zero based budgeting concentrates on the latter part and expands that base to represent the budget in total. Consequently, each and every program

is examined and approved afresh at each budget cycle. This is the basic contribution of zero based budgeting.

#### WEAKNESSES

It is not difficult to surmise that one of the criticisms leveled against ZBB is the inordinate time investment because of the necessity to generate a good deal of paperwork. For any organization which has a solid slate of objectives for each program, zero based budgeting should not be an onerous task, but it is clear that few organizations have developed prioritizing based on comprehensive objectives to a sufficient degree to facilitate this task.

Another complaint about this system concerns the tendency of managers using ZBB to develop a short-range perspective. Since long-range programs have no immediate pay-off and consequently do not look especially valuable when weighed against a shorter term, higher priority program, there is a tendency to let long-term programs drop or to stress the short-range objectives of programs in general.

A third problem sometimes cited has been the difficulty in maintaining a non-threatening atmosphere, as the process has developed a reputation for exposing 'cushioned' budget areas. Particularly where priorities are somewhat in doubt, insecurity can become quite common.

Finally, in the public sector it has been argued that the system can be used by politicians as a way of delegating responsibility to administrators for making budget cuts in sensitive areas. This is a criticism of the use being made of the system and not of the system *per se*.

As is the case with every other system, managers operating under threat will find a way to obscure the real value of ineffective programs. Unless they have clear program goals and objectives, the effective use of zero based budgeting is questionable. The imposition of zero based budgeting can force the generation of objectives but those objectives may not be meaningful. Thus zero based budgeting is only truly effective where there is already an effective management system.

#### STRENGTHS

In spite of these potential shortcomings, proponents of the ZBB approach claim a number of advantages. Specifically attributed to the ZBB approach is the contention that, when rightly used, the system forces managers to identify feasible alternative ways of providing programs. This encourages the development of creativity and initiative. Also, those managers closest to the implementation of programs have more influence in selecting areas where budgets can be cut, and in selecting areas where the budget should be increased. Other more general strong points include the fact that ZBB increases managerial awareness of the cost per unit of output, and increases the involvement of top and middle management in the decision-making process.

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<sup>9</sup> Further details of Westinghouse and McMaster's experiences with structuring and implementing ZBB programs are given in Appendix 1.



One of the advantages of ZBB in the private sector is that *all* programs are re-justified with each setting of the budget. Thus all programs are, at the outset, equally open to curtailment or dissolution. This cannot be so in the local government situation since many of the programs — sewers, roads, sanitation; etc. cannot be dismantled. For these mandatory areas, however, the ZBB process would be useful in that it would force managers to think of alternative ways of providing these services. To streamline the process in the municipal setting, it would probably be preferable at the outset to designate specific programs as being automatically above the cut-off line. This would eliminate wasted time in justifying an obviously necessary program.

Another alternative would be to use the ZBB approach on an interval basis, every two or four years. In intervening years the standard budgeting format could be used. This would eliminate what many consider to be overuse of an apparently powerful yet time consuming process.

Another alternative which has attained a good deal of popularity is the assessment of a proportion of programs each year. This however, partially destroys the basic strength of the ZBB approach because all programs are not judged against all other programs to determine priorities. Priority determination is a fundamental aspect of the concept.

There is currently not much material available which assesses the results of public or private sector attempts at using ZBB. Hopefully, as the results of the many current ZBB efforts are recorded, a better understanding of the contribution of different ZBB implementation methods will be possible. Our forecast would be, however, that ZBB will experience the same hazards as program budgeting. Serious attempts at ZBB are dependent upon effective management systems in all areas of the administration. Unless managers have goals and objectives and are able to measure the impact of programs in all the ways previously described, ZBB will have little real effect. Managers will learn to 'play' any externally imposed control system with great alacrity and expertise if it is not seen as an integral part of their every day management needs.

## SUMMARY

One of the problems involved in developing a chronology of budgetary processes results from the fact that each municipality develops a budgeting procedure which is in some way unique, as a reaction to specific management needs and systems of operation. Consequently, the approaches discussed here do not set out to explain or describe specific systems in operation but merely outline general directions of thinking.

It can be seen, however, that each of the approaches outlined here recognizes the need for a process of effective management and encourages the development of procedures to pursue that goal. Each approach essentially requires a management system involving goals and objectives on a program basis, some processes for the selection and prioritization of alternative programs and a definitive procedure to aid in allocating the necessary resources. As opposed to line by line budgeting, the more recent approaches do not assume a special rela-

tionship with the past but, in fact, reflect a movement away from a consideration of past expenditures. They require that the activities to be accomplished need to be established first and then the budget is developed to supply the necessary resources. Consequently, each approach is an attempt to place the budget in a context of effective management or perhaps, in many cases, to control management processes by means of the budget. Certainly, the primary motivation behind the budgetary reform movement is to speed up the budget process and to make the procedure, and the information that flows from it, more useful to line managers, finance department staff and elected representatives.

As can be seen, fiscally oriented approaches can be very effective when they incorporate output and program performance measures. They allow for the allocation of available funding on a logical and objective basis rather than on an arbitrary and subjective one. They clarify performance measures and organizational roles, highlight cross-divisional or cross-departmental problems and opportunities and, in general, help to provide the feedback necessary for effective management.

As noted, however, each has its own inherent problems. This being the case it should be borne in mind that the budgeting procedure must be designed to suit the needs of effective management in each municipal organization. This means that a consideration of effective management must precede changes in systems and procedures. If management needs are not given a thorough analysis before the establishment of a budget procedure, the procedure may later be abused, it may not be as valuable as it could be, and it may be a function of fashionable technique rather than a step towards a solid improvement in management.

When properly applied, these approaches reflect an attempt to modify an organizational system to improve decision-making and to facilitate effective management. As has been stated, one of the major findings of the LGMP experience has been that this whole area of objective determination and evaluation of results is one of the most poorly handled management aspects in local government and one that has been neglected as a focus for management performance measurement. The next section will deal with this topic in some detail.

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## Part V





## Program Oriented Measures

As discussed in the introduction to this paper, the past decade has witnessed a fundamental change in ideas about public expenditures from considerations of concern over financial inputs to focusing on what the expenditures were intended to achieve, i.e. outputs. This increasing interest on outputs, results and effects led to experimentation with financially oriented measurement systems such as PPB in many jurisdictions. With the proliferation of government programs in the late 1960's and early 1970's the measurement of the effectiveness of those programs became increasingly important. Elected officials wanted to be sure that money was being used to best advantage while administrators were also concerned with justifying their role and performing the appropriate function. Hence the concept of program evaluation flourished.

'Program evaluation' refers to the assessment of costs and effectiveness of ongoing government programs to determine how successful they have been in contributing to the goals and objectives of the jurisdiction. It provides information to the decision-maker that might suggest that a program be retained, expanded, modified, reduced in size, or even dropped. The results of program evaluation can also be used as input to a full program analysis that looks at the future costs and benefits of various alternatives.

Regular evaluation of the effectiveness of programs in meeting the public's goals and objectives is an important part of local government management. Evaluation can provide a reliable guide to managers in making program decisions, and sometimes it can indicate changes that will make programs more effective. Unfortunately, however, full program evaluations are seldom carried out on a regular basis by local government organizations. A basic problem is that the purposes of the programs are seldom adequately defined. In addition, cost, lack of evaluative expertise, uncertainty, lack of interest, lack of confidence in the techniques, and fear of possible unflattering results, are some of the factors that seem to hold local governments back from comprehensive program evaluation.

This section of the paper looks at the scope of program evaluation, some of the inadequate methods of evaluation currently in use in local government, and the essential components of program evaluation. Several of these components are then discussed in greater detail, including evaluation criteria, evaluation design, and sources of data. Some suggested criteria for deciding when to undertake a program evaluation are presented and some of the problems inherent in program evaluation

are considered. The section ends with a short discussion on the allocation of responsibility for program evaluation.

### SCOPE OF PROGRAM EVALUATION

Program evaluation has been described and defined in a number of ways not all consistent with each other. The four descriptions below are representative and suffice to bring out the major characteristics of program evaluation.

By program evaluation we mean assessment of the impact of past and present programs, projects and project components ('treatments'). Program evaluation attempts to determine what the government and people have been getting for their money: What works? What doesn't work? What have been the effects of past and present programs and projects? What factors are associated with success or failure of programs or projects?<sup>1</sup>

Program evaluation is the systematic examination of specific government activities to provide information on the full range of the program's short and long term effects on citizens. While a program evaluation may include consideration of workload measures, operating procedures, or staff, its chief focus is on measuring the program's impact or effects.<sup>2</sup>

The purpose of program evaluation is to determine the operations and effects of a specified program – relative to the objectives it set out to reach – in order to contribute to the effectiveness of decision-making surrounding the program.<sup>3</sup>

(Program evaluation is) ... the systematic accumulation of facts for providing information about the achievement of program requisites and goals relative to efforts, effectiveness, and efficiency within any stage of the program. The facts of evaluation may be obtained through a variety of relatively systematic techniques, and they are incorporated into some designated system of values for making decisions about social programs.<sup>4</sup>

All commentators appear to agree that program evaluation is something that is carried out 'after the fact'. Taken in this context program evaluation would look at

1 113, p. 451.

2 108, p. 3.

3 41, p. 1.

4 Tony Tripodi, Phillip Fellin and Erwin Epstein, *Social Program Evaluation: Guidelines for Health, Education and Welfare Administrators*, Itasca, Ill.: F.E. Peacock Publishing Co., 1971, p. 12.

actual past performance and attempt to determine whether the program accomplished what it set out to do during a stated interval or during the full life of the program, and in what ways citizens are better or worse off as a result of the program. Program evaluation differs from the ongoing monitoring of performance discussed in the first part of this paper in that it attempts to identify effects that can be attributed to specific programs. On-going performance measurement shows trends and general changes and does not try to separate out the program components of the change from the non-program components of the change.

### COMMENTARY ON DEFINITIONS

Certainly the overall reason for program evaluation is the determination of the program's impact upon its clients, whether those clients are the public, other organizational units, or other organizations. To an extent, it appears that all of the foregoing definitions are inadequate. None of them define the full scope of the function of program evaluation. First, that impact should be compared with the stated purpose of the program, to see whether or not that purpose is being fulfilled. Second, evaluation should be made to determine whether or not the program is achieving its stated objectives. If it is, and it is still not having the desired impact on the public, then there is a management problem to be rectified. If it is not achieving its objectives, the third step is to find out why. Fourthly, a program should be evaluated to ensure that it is using resources efficiently and that it is fulfilling its role as efficiently as possible. This is perhaps the most difficult aspect to evaluate and can only really be carried out effectively by the managers responsible for the program being evaluated.

### INADEQUATE METHODS OF EVALUATION

Most local government managers make some type of review of their programs every year. Several of these methods of review and their inherent deficiencies have been identified by Hatry *et al.*<sup>5</sup>

- 1 Hearings with Program Managers — complete objectivity can not be expected, the effects of programs on the users are often neglected.
- 2 Examining Program Statistics — data usually focus on inputs rather than outputs, measurement usually is not reflecting impact on the public and changes in data from one period to another are seldom systematically related to specific programs.
- 3 Application of Professional Standards — again usually expressed in terms of inputs not outputs, e.g. hospital beds per capita or case loads per welfare worker, thus failing to show impact on the public.
- 4 Evaluating Citizen Complaints — not likely to be representative of the total community, difficult to judge the extent of the problem.

The above methods also fail to provide information on the long-term benefits of the program or on the way the program affects different segments of the population.

Done properly, program evaluation can overcome all of the deficiencies mentioned above. There are, however, a number of problems with program evaluation, which will be discussed later, that explain why it has not been as boldly embraced by local government managers to date as one might have expected.

### THE ESSENTIAL COMPONENTS OF PROGRAM EVALUATION

Four important elements of program evaluation are:

- 1 the identification of program purpose;
- 2 the identification of program goals and objectives;
- 3 the identification of evaluation criteria or measures of efficiency and effectiveness; and
- 4 the identification of the segments of the population or organization affected by the program.

Hatry *et al.* make the following suggestions regarding the latter three elements.<sup>6</sup>

- 1 Develop people oriented goals, objectives and evaluation criteria to reflect the impact on the users of the service and/or the community.
- 2 Consider possible unintended consequences of programs, particularly negative effects, and incorporate them into goals, objectives and evaluation criteria in order to place the overall worth of the program in perspective.
- 3 Each program and sub-program will require a number of objectives and measures of effectiveness.
- 4 Evaluation criteria should not be rejected simply because of apparent difficulties in measuring them — there is usually some way to measure even the most qualitative evaluation criteria.
- 5 Distinguish program effects on specific elements of the client population based on classification criteria relevant to the program, including such criteria as residence location, sex, age, income group, education level, etc. If the program involves support services, the function and technology of the client sub organization will be important.
- 6 Always include dollar cost as one criterion so that the cost may be compared to the impact or effect of the program.

### EVALUATION CRITERIA

Once the program purpose and goals and objectives have been identified the evaluative criteria can be established. This is often not a simple task, for measuring instruments and methods constitute one of the most difficult areas for evaluation studies. Government programs seek to maintain and increase the well-being of certain segments of the total population. If all programs were perfectly designed and carried out, and the circumstances giving rise to the programs never changed, then program inputs would be a good surrogate measure for increased well-being. Of course these conditions never occur in real life and so program inputs are often not adequate measures.

The next level of measures for program evaluation is operational outputs. For a recreation program with the goal of increasing the skills and hence enjoyment of

5 108, p. 13.

6 108, pp. 23-27.



children participating in certain sports, this might be the number of sports skills clinics held for children during the year. Again, this is not a strong surrogate to measure change in well-being, but at least it may show efficiency of operations.

A third level of measurement is program outputs. In the recreation example, a program output measure would be the number of children attending the clinic. This type of measure may be the best available if no direct measure of program effectiveness can be made.

The highest level of measurement, and the closest approximation of change in well-being, focuses on program effects. In this case it would be a measure of the increase in the participants' skills and the increase in their enjoyment in playing the particular sports, following exposure to the program. Deciding on, and obtaining data for evaluation criteria that will give an accurate indication of a program's effectiveness, is a difficult and sometimes time consuming and costly process.

The Urban Institute in Washington, D.C. has done a great deal of work in this area and has devised effectiveness measures in a number of local government service areas. The following represents the Urban Institute's sample goal for a local government transportation program, and the suggested basis for evaluation. These are given as illustrations of 'people oriented' evaluation criteria.<sup>7</sup>

#### Program goal

To provide access to community services, facilities and employment in a safe, quick, comfortable and convenient manner for all segments of the community without causing major harmful side effects.

#### Evaluation criteria

##### Accessibility and convenience

Percent of residents not within 'X' distance of public transit service and more than one hour from key destinations.

Citizen perception of travel convenience.

##### Travel time

Time required to travel between key origin and destination points.

Congestion – duration and severity of delay.

Road surface quality ('bumpiness') index.

Citizen perception of travel comfort.

##### Safety

Rate of transportation-related deaths, injuries, and incidents of property damage.

Number of transportation crime incidents.

##### Minimum cost to users

Cost per trip.

##### Maintenance of environmental quality

Noise level along transportation corridors and number of persons at risk.

Air pollution attributable to transportation sources and number of persons at risk.

Citizen perception of adequacy of transportation services.

#### Monetary costs

##### Program costs.<sup>8</sup>

In practice, it would appear necessary to operationally define certain elements of the program. For example, what does quick access mean, or safe, or comfortable, or convenient. With these defined, objectives can be set to improve each of them and the program achievements can be determined in reference to some concrete criteria. Citizen input would be meaningful and relevant to both the operational goals and defined objectives of the program and would indicate whether the objectives were satisfactory as well as whether they were being achieved. The feedback from the client population will not indicate the level of service of the program relative to programs in other locations, however, because people will adapt to the level of service and will only react to changes in that service.

In most programs, absolute measurement criteria will not be available, e.g. What is an ideal police service or ideal crime solution level? Therefore relative measurements will be necessary, generally based on changes over time.

Another question involves the degree to which various measurement criteria indicate the success of a program. Which should be weighted most heavily and how might they be combined? Without some evidence of client priorities, output data have limited meaning.

#### EVALUATION DESIGN

Once program goals and objectives have been determined and some evaluation criteria selected, some way is needed to determine whether the changes which are identified can be attributed to the program under consideration. Ideally, the evaluators would like to know what would have happened had there been no program, assuming that the world had remained the same in all other respects, and compare that to what actually happened. Because this is virtually impossible, a number of procedures of different degrees of sophistication and reliability have been designed to approximate it.

A great deal of research has been done in the area of evaluation design.<sup>9</sup> For these purposes, five possible experimental designs will be briefly examined.<sup>10</sup>

##### 1 Before and after program comparison.

This is the most common but perhaps the least reliable evaluation design. Using one group only, this design requires a measurement of evaluation criteria values before the program is implemented and another one some time after its introduction or when it is termi-

7 114, p. 9.

8 Further examples of program evaluation goals and objectives are given in Appendix 1.

9 The interested reader is referred to a classic work on this topic by Donald T. Campbell and Julian C. Stanley entitled *Experimental and Quasi-Experimental Designs for Research*, Chicago: Rand McNally and Company, 1966.

10 The following information is based primarily on Chapter III of 108, and on 12.



nated. This method is inexpensive and does provide a base line measure for comparison but makes no effort to separate out program effects from non-program effects so that there are a number of possible sources of error. The 'before' measure itself may be a stimulus to change, change may occur spontaneously, or changes shown in the 'after' measurement may be due to instrument unreliability. Thus this design should be used only if personnel and fiscal constraints preclude the use of a more sophisticated design.

## 2 Comparison of planned versus actual performance.

This is another simple, straightforward and inexpensive approach. It compares actual post-program data with targets or estimates set before and/or during the program. This design, requires that the government set goals and objectives in terms of effectiveness and efficiency. Like #1, it does not provide for separating out program effects from non-program effects. When any design is used, but especially these first two, evaluators must make a determined search for other likely explanations for what has occurred.

## 3 Time trend projection of pre-program data compared to actual post-program data.

This design compares post-program data with projections based on pre-program data. It is useful if data for previous years are available and have shown a somewhat stable trend. This overcomes the problem inherent in the first design of attributing effects to the program that in all likelihood would have occurred in its absence. This design is more expensive than design #1 because some statistical expertise and more data collection are called for.

## 4 Comparisons with jurisdictions or population segments not served by the program.

This design involves comparing evaluation criteria values for the jurisdiction that implemented the program with those of a similar jurisdiction or population segment that did not, and crediting any significantly higher incidence of the desired condition or behaviour to the program. Finding a similar population segment can be difficult or impossible, however, so this design may be impractical or may not be a completely reliable measure of program effects as a result of basic differences between the two populations.

## 5 Controlled experimentation.

This is the most reliable evaluation design but not necessarily the most valid. It is also the most difficult and the most costly. Pre-selected similar groups, some involved with the program (the experimental groups) and some not, (the control groups), are compared both before and after the program. Alternatively, variations of a program can be carried out with different groups and compared. This design requires a considerable amount of managerial and analytical skill and time to plan, carry out, and analyze the results. It also creates a number of special problems. People who know they are part of an experiment are likely to act somewhat differently than those who do not. People who volunteer for the program are also not likely to be representative of the whole clientele group. Finally, it may be politically impossible to provide a service to one group but not to

another. Also, if a long-term program is under investigation, the effect of many additional variables cannot be eliminated.

Evaluators and managers must realize that even in controlled experiments one can seldom attribute changes to any one factor with absolute certainty. In the local government sector, where experiments cannot be rigorously controlled, certainty is even less likely.

## SOURCES OF DATA

To be useful to the evaluator, data must be accurate, complete and comparable to other data. Existing records and collection procedures may provide some of the data required by the chosen evaluation criteria but these sources are seldom sufficient for a proper program evaluation. Other possible sources include new types of records instituted because of new evaluation criteria, interviews with users of a service or clients of a program (sometimes citizens at large), professional ratings of social service programs, cleanliness of streets, etc., questionnaires, personal diaries, and, perhaps most important of all, personal observations. Consequently, all the measures discussed this far are potentially useful in program evaluation.

There are many problems and factors to be taken into account when considering the use of these possible sources of data. A full discussion of the pros and cons of each source of data and method of collection is beyond the scope of this paper. However, some of the limitations of the various sources are noted below, along with some important caveats for evaluators.

- 1 When employing first hand observation the evaluator must take care to ensure that his observations are representative of all aspects of the program.
- 2 The evaluator must guard against receiving biased reports and ignoring certain perspectives.
- 3 Attitude measures often turn out to do little more than measure the appeal of the program to participants. Information on changes in attitudes is useful only if there is clear evidence that the attitudes measured are connected in some way to the behavioural (or other) goals of the program.
- 4 Interviews are generally more flexible and produce higher quality information than do pencil and paper questionnaires.
- 5 Data collection procedures should have as little effect as possible on the day-to-day working environment.
- 6 Evaluators sometimes are so eager to create their own instruments that they ignore regularly kept and readily available records, documents and statistics on the program.
- 7 Managers who know that their program is being evaluated on the basis of information they submit may consciously or unconsciously slant and distort their input.
- 8 Program records may be inaccurate, incomplete, out of date, or unsuitable for evaluation because recording techniques, definitions or categories have changed over time.

- 9 Citizen surveys are time consuming and costly, require technical resources to design the instrument, can provide misleading results if the sample is haphazardly selected or self-selected, e.g. questionnaires that must be mailed back, and are limited by the respondent's memory and willingness to answer. Professional ratings can also be costly and time consuming.

## SELECTING ISSUES FOR PROGRAM EVALUATION

Financial and personnel resources for local government program evaluation tend to be rather scarce so it is important to choose programs for which the evaluation will have the greatest political and economic impact.<sup>11</sup> The probable benefits of the evaluation should exceed its cost and the program should be important enough financially to warrant evaluation. Suchman<sup>12</sup> lists three prerequisites for a worthwhile evaluation:

- 1 an objective or goal that is considered desirable;
- 2 a plan of deliberate intervention capable of achieving the goal; and
- 3 a way of determining the degree of goal achievement attributable to the planned intervention.

Hatry *et al*<sup>13</sup> have gone into greater detail in suggesting a number of criteria for helping local government managers to select appropriate programs for evaluation. It may be helpful to repeat these criteria here.

- 1 Can the results of an evaluation influence decisions regarding the program? Programs for which a decision regarding continuation, modification, or termination needs to be made are obvious candidates. Poor candidates are those for which decision-makers have strong preconceptions of program value or where there is considerable support by influential vested interest groups — if these circumstances make it very unlikely that the program would be altered regardless of evaluation findings. (However, in some cases the program may be of such great importance to a community that government officials may proceed with an evaluation and be prepared to seek changes despite political risks.)
- 2 Can the evaluation be completed in time to be helpful to decision-makers? Evaluations which are completed after public officials become committed to a decision are essentially useless.
- 3 Can the evaluation be done?
- 4 Are sufficient data obtainable on the important effects of the program? Program evaluations can never resolve all questions, but before beginning an evaluation it should first be clear that it will be possible to gather meaningful data on significant aspects of the program. For example, long-run impacts of manpower training, health, or education programs may not appear for many years. In most cases, governments are unable to wait this long. Nevertheless, it is often true that intermediate results can be made available and provide significant information for interim decisions.
- 5 Can sufficient resources be obtained to meet the time schedule and technical requirements of the evaluation?

- 6 Has the program been stable enough so that an evaluation will provide relevant information? If the program is constantly changing, or is about to change in significant ways, it is not a good candidate for evaluation.
- 7 Is the program significant enough to merit the evaluation effort? Programs which involve a large amount of government resources or those programs which have important benefits and possible negative consequences to the public, other things being equal, should be given higher evaluation priority. Thus, the likely cost of the evaluation should be compared to the possible decreased cost or improved effectiveness that could result.
- 8 Is the program suspected by the government of being marginal in its performance? If so, there may be opportunities for making major improvements or cost reductions. Relatively old programs that have not received an in-depth evaluation in a long time may fit this criterion.
- 9 Is it a new program with uncertain potential benefits and costs? The program should be reviewed after operating long enough to demonstrate its effectiveness. This probably means a minimum of six months to one year of operation for most programs, though even these time periods are too short for evaluating long-term effects. New programs are often most open to alteration because they have not had the opportunity to build up a strong constituency. Evaluation of programs that are candidates for expansion can be particularly valuable. Actually, new programs should have 'built in' measurement criteria which determine whether or not the program should be continued after a stated period of time.

## PROBLEMS OF EVALUATION

Program evaluation suffers from a number of problems which fall into two categories, analytical problems and institutional or political problems.

Many of the analytical constraints are quite technical and are beyond the scope of this paper. Some of the difficulties with evaluation design and data collection have already been mentioned. In general, valid, reliable evaluation is difficult to perform, requires personnel with quantitative analysis skills, and it can be costly. Merely securing agreement on the goals and objectives of a program can be difficult, particularly where the program has broad social aims. But if goals and objectives are not specifically stated, evaluation objectives also tend to be vague and subsequent studies will tend to be inferior. In fact, if the development of firm objectives is not feasible the rationale for a program should be questioned.

Another problem that confronts evaluators is the selec-

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11 Examples of the application of program evaluation are given in Appendix I.

12 Suchman, Edward A. 'Action for What? A Critique of Evaluative Research', in *The Organization, Management and Tactics of Social Research*, edited by Richard O'Toole Cambridge, Mass.: Schenkman Publishing Company, 1970, pp. 90-99.

13 108, pp. 110-111.



tion or formulation of measures. As discussed above, direct measures of a program's effectiveness or progress toward program objectives are often not feasible, and substitute measures have to be used. While some measures of program impact or value can usually be devised for even the 'soft' local government programs, evaluators have difficulties determining the true causal relationships between inputs and outputs, particularly in time to be of use to decision-makers. If certain effects of the program fall outside the measures chosen they may go unnoticed. Alternatively, incomplete or imperfect measures may be treated as if they measured all aspects of the program, resulting in inaccurate evaluations.

Further, program evaluation sometimes answers the wrong questions. Wholey<sup>14</sup> advises that:

... the evaluator must resist the temptation to search for answers to questions that interest *him*, but which may not be high on the list of questions the *decision-maker* wants answered. Decision-makers will be convinced of the worth of evaluation if evaluation meets the needs of the decision-maker and provides information useful to him.

Finally, the interpretation of the data collected creates a problem. The evaluator must try to recognize the potential influence of his personal values and biases on the data interpretation process. This is an exceptionally tall order. Compounding the problem is the fact that different people looking at the same data can come up with different, but equally rational and possible conclusions.

Even if an evaluation study can surmount all of these analytical constraints, it must still deal effectively with the organizational and political environment in which it is carried out, if it is to be successful. Evaluation can be dangerous and threatening to managers and to groups of citizens who benefit from the program and have vested interests in its continuation. Thus, unless the evaluation is carried out on a new program or a pilot project that is likely to be expanded, evaluation will quite possibly meet with considerable resistance and a lack of co-operation.

Even if a program evaluation is successfully carried out, all will be for naught if the results and recommendations are subsequently ignored – and many are. One reason for this is that frequently they are not written in a style that can be easily read and understood. Excessive jargon and technical terms are used. Masses of statistics are presented without sufficient interpretation. Information is sometimes presented in a disorganized fashion and without an adequate executive summary.<sup>15</sup>

Even when properly understood, the effects of a program evaluation study can also be difficult to measure. While the study may not produce an immediate policy

change, it may affect the thinking of decision-makers and its recommendations may be implemented gradually over time.

In a somewhat pessimistic summary of the difficulties encountered by the U.S. Federal Government with program evaluation, Wholey says:<sup>16</sup>

... we have all learned that evaluation is difficult, takes a lot of time to carry out, and can be very expensive. We have discovered that the information generated by evaluation studies is often incomplete, suspect, and unrelated to the problems at hand. We have found bureaucratic and organizational constraints so formidable that today, after investment of significant resources and effort, *not one* federal agency has an overall evaluation system and few programs are able to make any use of the evaluations produced. On the whole, *federal evaluation efforts have not been cost-effective* in terms of impact on policy or program development.

Most critics and proponents of program evaluation alike are more generous than Wholey and feel that while techniques are imperfect and other problems do exist, program evaluation can and does provide a reasonably accurate picture of what a program has achieved with the resources allocated to it.<sup>17</sup>

## RESPONSIBILITY FOR PROGRAM EVALUATION

It is probably best, for obvious reasons, if the people responsible for a program are not also responsible for its evaluation. What is important, however, is that the program managers themselves are involved in the determination of criteria and feel that the measures chosen are adequate for the purpose. The co-operation of these managers is essential because they hold much of the detailed information about the program in their heads. Thus, it is important that these managers are not alienated by efficiency or evaluation experts. Program evaluation should be as non-threatening as possible, especially where it is aimed at program improvement rather than at a continue/discontinue decision.

Most large municipalities (100,000 or more people) can probably afford to establish small central staff units to be responsible for evaluation for all departments and programs. This type of arrangement seems to be most workable in local government as long as the people who staff the unit work closely with other managers. Heads of departments where evaluations are taking place should participate by helping to identify program goals and objectives, evaluation criteria, special problems, etc. Outside consultants can be used to supplement the internal evaluation unit and to provide training, or they may carry out complete evaluations. The evaluation unit should be management rather than financially oriented. It should examine management processes as well as inputs and outputs, and should preferably report to a chief administrator or senior management team.

## EVALUATING FLEXIBLE PROGRAMS

In many cases the program changes and adapts as it proceeds. This is particularly true if those programs concerned with organizational development or man-

14 70, p. 360.

15 A good guide for evaluators is the U.S. Department of Health, Education and Welfare's, *Preparing Evaluation Reports: A Guide for Authors*, Washington, D.C.: U.S. Government Printing Office, 1970.

16 70, pp. 361-362.

17 The experiences of three municipalities, in applying program evaluation, are given in Appendix I.



agement improvement. Evaluating such programs is more difficult and requires:

- 1 a detailed picture of the state of the organization at the outset (in regard to organizational processes, procedures, formal and informal structures, objectives, inputs and outputs);
- 2 a clear description of any changes which are instituted in the program and the revised goals and objectives of the program; and
- 3 definitive measurement of relevant 'organizational state' variables, discussed in para #1, at the time that changes in the program are introduced.

By documenting 'organizational state' variables and changes in the program throughout the implementation period the effectiveness of the program can still be measured, and the relationships and outputs which change can be attributed to the program.

## SUMMARY

Program evaluation is a fundamental aspect of management which should be carried out by program managers whether or not a formal program evaluation is completed. For evaluation to take place, the purpose of the program needs to be clearly defined at the outset of the program, and goals and definite measureable objectives need to be established for the program. If this is done the program managers have essentially defined the evaluation criteria to a large extent. The very existence of stated purposes and effectively determined goals and objectives should be a positive factor in program evaluation.

Evaluators will need to examine the impact of the program on the client to determine whether or not changes in direction have taken place and should be sure to obtain meaningful client input. Clients and program managers may often be helpful in interpreting data and identifying causal factors.

The evaluation should be able to answer three major questions.

- 1 Is the program established as a comprehensive management program which makes evaluation possible or is it likely that the evaluation itself is inaccurate?

2 Should the program continue?

- 3 What can be done to improve the program at this point?

If the answer to the first question is no, then evaluation is not possible and the program managers should be aided in establishing a program which can be evaluated. Probably a well organized management audit or evaluation function could examine programs at the outset, and periodically thereafter, to ensure that the program has a clear definition of purpose, definite goals and objectives and evaluative measurement criteria. If these requirements are not established, the effectiveness of management in general can be questioned — irrespective of whether or not an outside evaluation takes place.

Thus, program evaluation fits in well with the concept of effective management adopted by this paper. It encompasses the techniques discussed so far in this paper and puts them in a context. It uses output measures, fiscal measures, individual goals and objectives. The primary difference between program evaluation and the other measures is that program evaluation does not focus on outputs, budgeting systems or managers as ends in themselves. It focuses on the effects of all of these activities on the client. It does not begin with a question of improvement of existing systems. It begins with the establishment of organizational purpose and ends with a discussion of how effectively the organization is fulfilling that purpose. Thus program evaluation requires a much broader perspective than the other approaches to measurement discussed this far. Not only is it a broader and more comprehensive approach to measurement but by documenting organizational processes, structures, inputs and outputs at the time at which changes occur, the program can be flexible but can still be subject to effective evaluation and measurement.



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## Part VI





## Management Process Oriented Measures

The measures of performance discussed thus far have been concerned in one way or another with the measurement of inputs or outputs. For the most part they have considered the municipal organization to be a system made up of sub-systems or programs. The evaluation of performance has concentrated on measuring the inputs to the system or the outputs from it.

Some of the more sophisticated approaches, which have generally been financially oriented, e.g. PPB, have attempted to evolve measures for both inputs and outputs and to describe the relationship between the two in cost/benefit terms. These measures have aimed at determining how the cost/benefit ratio could be improved or at how the output of the system could be adjusted to meet the needs of the users more efficiently.

The resulting measures were useful in that they stimulated thinking about systematic program evaluation and performance measurement. They moved away from unrelated measures of input and output toward measures of the impact of municipal activities with costs considered.

Admirable as they are, however, these measures cannot tell the whole performance measurement story. If the purpose of performance measurement is to help both individual managers and organizations to improve their operations, these measures leave many questions unanswered. It is true that improvements in the cost/benefit relationship generally reflect improvements in the operation as a whole, but for most managers the guidelines provided by input and output measures are too broad and leave them with insufficient direction for improving their own operations.

Cost/benefit relationships are, in effect, dependent upon management activity and operating procedures. By themselves input/output measures cannot pinpoint those aspects of management that should be retained and emphasized or, on the other hand, those which need improvement. They can tell how well a work unit is operating but they cannot tell why, or how effectively, the manager(s) of that unit is/are contributing to that output.

### THE ROLE OF PROCESS MEASUREMENT

While recognizing the contribution of input/output measures to management, this section emphasizes the importance of taking performance measurement inside the system and applying it to the internal workings or processes of management. Only then can performance measurement fulfill its potential, by taking into account the relationships between input, managerial perfor-

mance and output, and not just the relationship between the costs and benefits of a program.

An example of these relationships is as follows: when a city's asphalt overlay program is completed without a high degree of efficiency, it may be inferred that the manager responsible is not doing a good job. While this may be the case, it is important to note that the relationship between managerial performance and the effective delivery of services is not necessarily a direct one. That is, a manager may be operating at a high degree of efficiency and effectiveness, yet due to constraints beyond his control — severe budget cuts, overwork, lack of manpower, poor weather, illness, strikes delaying delivery of materials, etc., his output may be down one year in spite of the most exemplary planning, foresight, motivation, resource allocation and coordination.

On the other hand, the effective delivery of services may be achieved by a manager whose talents are being only partially tapped, or by a manager who is actually incompetent but who appears effective because of his effective subordinates, or because the financial, material and human resources at his disposal are actually surplus to his needs. In fact, a thorough management process analysis may even indicate the existence of one or more unnecessary management levels.

In addition, of course, individual managers should not be evaluated in isolation but should also be judged partly in terms of their interactions with other managers. Although each manager can be very effective and efficient with his own resources, achieving his objectives on time and without waste, he may have done so at the expense of other sections of the organization.

Another important consideration is the time which managers spend assisting and developing their subordinates and co-operating with others, rather than just emphasizing the improvement of the output of their own units. A manager could limit these important roles and spend more time on his own operation, but by so doing he may not be contributing in an optimum way to the organization as a whole. Output and input measures, whether or not they are in program form, do not recognize co-ordinative, co-operative and developmental roles, neither do they indicate or identify problems with internal co-operation, co-ordination or communication. These can be the key factors when assessing the performance of support functions such as Purchasing or Personnel. Using the road repair example, the manager responsible for asphalt overlay needs the full backing

and support of these other departments and also needs support from his own department's equipment maintenance division. If he does not receive this assistance his program will suffer to some degree, through no fault of his own.

Since most organizations expend a great deal of effort and money on managers, it would seem that the evaluation of managerial performance is important. This involves determining how well the manager himself is contributing to the health, efficiency and effectiveness of his unit, and of the organization as a whole, and ensuring that the manager himself obtains that information in a useful form. Any performance measurement system should provide individual managers with meaningful feedback on their activities. It should indicate where activities differ from those which were planned and why this difference is occurring. It should also indicate what processes and behaviour need to be changed so that the manager can use this information as a guide to improving his own performance.

In order to measure the management function fully, different types of measures are needed as part of a performance measurement system. Managerial performance measures can fill in many of the gaps left by service delivery performance measures and they can complement and clarify those measures.

As noted previously, the areas of managerial performance and internal procedures and processes seem to have been neglected in the performance measurement literature, and in considerations of methods of organization and management improvement. The emphasis has been on an external evaluation of service performance — on measures that are directly related to the level and cost of product delivery to the outside environment. These, properly designed, can indicate how well a manager's unit is performing the job assigned to it, but they do not explain the level of performance, nor do they constitute a practical input to managerial development and self-improvement. They can be used to exert pressure by upper management or by a finance department, but such pressure may actually create more problems than it solves, because such measures indicate an effect but do not identify a cause.

The reasons why so little attention has been given to managerial performance measures in the past are not difficult to determine. 'Results are what count'<sup>1</sup> and management processes and procedures do not have the same visibility as organizational outputs. Inefficiencies in the processes of management are not as apparent as those pertaining directly to the output of the entire system, although they do contribute in a major way to the effectiveness of that output.

Because they are not so visible, management processes are not so political. Political pressure, primarily from council, is a major cause of change in municipalities. This political pressure concentrates upon input (costs) to a high degree and output (services) to some degree.

As a consequence, management processes are infrequently brought forward for appraisal or evaluation. There is an assumption that managers will solve their own problems if they are placed under sufficient pressure and, to some extent, that assumption is correct. When jobs are threatened, people will exert more effort. Under stress, some economies will be realized. Such indiscriminate pressure, however, is costly. Unless effective performance is recognized, good people will leave and the organization will suffer. Unless inefficient processes are identified and changed, optimal output improvement is not possible. Pressure to force higher production, and carefully applied approaches to management improvement are quite different things. The first may result in some short-term gains, whereas the second should result in larger, long-term gains if the new approaches are properly applied.

As far as performance measurement is concerned, the authors believe that there is a real need to develop an interest in a system that emphasizes the improvement of the internal functioning of the organization. Basically, what is needed is a system that concentrates on the needs of individual managers in their effort to develop an effective management process. The LGMP Team came into contact with a number of local government managers who were doing a poor job but this was not necessarily because they were personally ineffective. In many cases it was because the organizational system did not give them the assistance, the right procedures, the feedback, or the incentive to be effective managers. The exact nature of management process problems can only be understood through an internal analysis of the operation of individual managers and of the various organizational processes. These problems cannot be identified through the examination of unit inputs and outputs by themselves.

Analysis of internal factors means measuring the inputs and outputs of support units and examining the systems and procedures whereby managers interact (e.g. the planning process, the selection process, the financial information system, the administrative systems — filing, routing, routines, etc.) to ensure that they are contributing in an optimal way to effective management. Internal analysis also involves ensuring that each manager has a clear understanding of his responsibilities and knows what is expected of him. His leadership and decision-making, participation, and encouragement of individual development are also important factors contributing to management effectiveness in the long-run and they too can be subjectively analysed.

The LGMP experience indicated that a great deal of organizational inefficiency and ineffectiveness was rooted in the areas just identified. Procedures need to be clearly outlined and process problems identified before output measures or 'results' can be meaningfully interpreted or be used in anything approaching an optimal way in improving management.

There seems to be no question regarding the importance of an analysis of these areas for managers who are sincerely interested in improving their own operations. For these managers, a system is needed which will em-

1 The list of references for this trite expression would number in the thousands; in fact, we probably all agree. The key question is: 'How can results be improved?'



phasize the roles which managers should perform and which will provide feedback on the important aspects of each job, including the processes and activities involved.

In the following pages an effort will be made to first outline and then to discuss some of the processes and activities which seem to be involved in local government management and finally to suggest ways in which managerial effectiveness in these areas may be evaluated and improved.

## THE PROCESSES AND ACTIVITIES IN LOCAL GOVERNMENT MANAGEMENT

If it is accepted that the purpose of performance measurement is to help managers to do a better job then it would seem logical that the best starting place would be to identify what managers do, where their problem areas are, and what information they need. The measurement system can then be designed to fit management needs as closely as possible.

Quite often, however, this approach is not taken. The starting point is the development of a measurement system, usually highly quantitative, which is then applied where it seems to fit. One problem with this approach is that managers will not attempt to apply systems of measurement which do not make sense to them or which do not seem to contribute to management improvement. Second, managers tend not to rely completely on externally defined, quantifiable and supposedly objective data. Each manager develops a subjective personal information system which is often more important and meaningful to him. Applied measurement systems tend to seek out those activities which are amenable to quantifiable measures, whereas individuals seek out those activities which they see as being important to themselves and to the job.

The approach suggested here is to attempt to identify and categorize activities and processes that are important to local government managers and then to look at possible means of measuring the efficiency and effectiveness of those activities and processes. This means that the measures in some of these areas will be very subjective, and improvement, as a result of such measures, will depend almost completely upon proactive individual managers who take the initiative to improve their own operations. In other areas, such as support services, client feedback is readily available regarding both output and processes, and measures are more public and objective.

The management activities and processes for which local government managers need performance information for assessment and improvement, can be logically separated into a number of somewhat inter-related categories. These categories of management activity can be evaluated through methods which range from the self evaluation of personal management style, to broad measures of the operational efficiency of the whole local government organization. The categories include the following.

- 1 The individual manager and his ability to influence both his environment and the activities within his area of responsibility, including his method of re-

source allocation and his procedures for dealing with emergencies or crises.

- 2 The formal inter-divisional, inter-departmental and inter-organizational processes and procedures, and more informal patterns of interaction. These processes and procedures include both the support activities of staff departments and divisions and the operating processes, such as the budget, internal communication processes and information systems, which extend across a large portion of the organization.
- 3 The processes of decision-making at the council level, including methods of communication with the public and council-administration interactions and relationships.
- 4 The processes and procedures whereby the municipality adapts to environmental changes and acts to influence its environment where possible, e.g. the means which it uses to influence provincial planning decisions and legislation.

In the following discussion of each of these areas, an attempt will be made to be as specific as possible regarding the variety of ways in which performance or efficiency and effectiveness may be measured or estimated. Some of these are purely subjective and for the private use of managers intent upon improving their operations, whereas others are appropriate for either personal or external performance evaluation and potential improvement.

### 1 The individual manager's sphere of influence

Each manager has the potential to influence his environment and to improve his own effectiveness in a number of ways.

These include:

- a his personal organization and approach to administration;
- b his supervisory activities, including the leadership he provides, the degree to which he delegates and the amount of participation and involvement he encourages;
- c the information and communication systems which he establishes;
- d the way in which he deals with the allocation of scarce resources; and
- e the way in which he handles emergencies or crisis situations.

While each of these is inter-related to some extent, a short examination of each in isolation has some merit.

#### a PERSONAL ORGANIZATION AND ADMINISTRATION

In establishing the role he is to play and the functions he performs, a manager can range from a relatively proactive stance to a relatively reactive stance. As a result of governing legislation, past practice and the nature of the local government organization, the tendency in local government in Ontario has been to be relatively reactive. Perhaps the primary reason for this is that there are few apparent rewards for risk-taking or innovation. During the LGMP we found that surprisingly few ad-

ministrators took the initiative to really examine the purpose of their jobs and then to attempt to develop their procedures and roles to fulfill the appropriate functions. As would be expected, of course, those reactive managers also do not encourage such activities by subordinates and in some cases such behaviour is actually discouraged.

A large proportion of managers simply define their jobs in terms of past practices and the expression, 'That's the way it is in local government' typifies their reaction to suggestions for potential change. Quite clearly, the development and encouragement of a proactive stance toward purpose and role clarification, the sharing and assignment of responsibility, and the development of an administrative system which is in concert with other administrative systems in the organization, represents one of the primary potentials for management improvement in local government. Management is a highly individual activity, but effective managers are usually proactive managers and they encourage proactive behaviour in their subordinates.

The proactive manager assumes the initiative for management improvement by establishing goals and objectives, by getting the job done, by recognizing any errors made, and by learning from them. Managers can ensure that responsibility and authority are identified and properly located in the organization. They can ensure that they are using their time wisely and that they are delegating the appropriate authority to lower level managers. Most apparent management overload in municipalities is probably caused by the inability to delegate.

Managers can ensure that internal systems, e.g. filing, are co-ordinated across work units. In this way internal co-operation is facilitated.

There are many areas in which the manager can improve the things that he does, but the question becomes 'Can such outputs of effective management be measured?' The answer is yes – perhaps not by a team of internal or external auditors, because they can be easily misled, but by each individual manager who knows whether or not he is clear on his responsibility and to what extent he is really trying to improve the information and communication systems and other processes. Not only is a manager aware of his behaviour in these areas but he can easily become aware of the behaviour of those managers or employees reporting to him and can offer them appropriate advice.

Measures in this area of personal responsibility include the answers to the following questions.

- i Can the manager identify clear and comprehensive goals and objectives for his job?
- ii Can each person reporting to a manager identify clear and comprehensive goals and objectives for their jobs?
- iii Do members of the unit feel free to identify problem areas which they feel prevent them from achieving optimal effectiveness, and do they have definite channels to facilitate that identification process?

- iv Are there any unresolved overlaps in responsibility in the unit?
- v Is every individual clear on his responsibilities?
- vi Does anybody in the unit feel that he has too little time to do an effective job?
- vii Can each person fully justify his position with concrete, identifiable and necessary activities?
- viii Are communication systems, e.g. letter format and filing systems, common across the unit?
- ix Does every individual in the unit feel that he is performing those tasks which enable him to make an optimal contribution to the organization?

Effective management systems are built on the acceptance of appropriate responsibility at each succeeding level of the management hierarchy. Also required is the development of a personal monitoring system to ensure that effective management processes, such as those described, are in operation at one's own level and at the next lower level. Overview process audits can help to identify weaknesses, but real management effectiveness depends upon the acceptance of *personal* responsibility for increasing efficiency and effectiveness at all levels in the organization.

We have been talking bravely about assigning responsibility for management improvement to the individual manager. Of course, the organization must take some responsibility. If it does not reward management behaviour designed to seek out methods of improving management, any initiatives gained will be short-lived. Senior management must recognize that the organization has a responsibility to reward initiative in return for managers' acceptance of the role of organizational improvement. The implications of the genuine acceptance of responsibility for optimizing efficiency and effectiveness at all managerial levels are rather startling. The LGMP staff are aware of municipal departments which could probably provide a better service with half their present managerial staff. Auditors and consultants are unable to deal effectively with such cases of inefficiency because the fault often lies with a passive non-acceptance of responsibility for emphasizing efficient and effective management at upper levels of management. It is the individual managers, performing their full managerial roles, who are capable of fully recognizing inefficiencies and of carrying out an optimum management improvement role. Some helpful questions which can act as measures in this area include the following.

- i Can the manager vouch for the organizational requirement for every person reporting to him and does he know the functions that subordinates perform?
- ii Does each person in the unit feel that they will be rewarded for more effective and/or more efficient performance of their jobs or for contributions to overall efficiency and effectiveness?

This discussion of the individual manager's activities has been carried far beyond the identification of potential output indicators of managerial effectiveness. This is because such measures are an oversimplification of



the role of measurement in management. As discussed earlier in this paper, measurement is an integral aspect of management and must be designed to provide feedback on all aspects of the management process.

#### **b SUPERVISORY AND LEADERSHIP ROLES**

A large part of effective leadership involves an understanding of problem areas in one's own zone of responsibility, and the development of methods of management improvement in company with subordinates who are affected by the problem. Personal feedback and control processes are important because a manager must know and be able to influence activities within his area of responsibility, without taking over the detailed management function from his subordinates.

Leadership is a widely recognized role but the processes of leadership are hard to identify and leadership effectiveness is certainly hard to measure. Nevertheless, a few suggestions are offered below on how a manager might gauge how well he has been operating in this area.

- i Figures for the manager's unit on transfers, requests for transfers, dismissals, resignations, absenteeism, etc., can be useful in that they can be compared to those of other units, or to figures for his own unit over time.
- ii The frequency with which the manager attempts to find out how satisfied his employees are with their work situation or just how conscious he is of their feelings in this area.
- iii The frequency with which he carries out task oriented problem identification sessions with his immediate staff and the relative openness of those sessions. (This may need to be appraised by an independent manager or facilitator.)
- iv The degree to which employees' jobs are structured according to their individual strengths and weaknesses.
- v The degree to which his staff are clear on their responsibilities and have appropriate goals and objectives.
- vi The degree to which the manager is aware of and able to reward productive behaviour. Does he have a performance appraisal scheme involving adequate feedback?
- vii The extent to which he is able to provide clear goals and objectives for his own role, as a reference for his subordinates.
- viii The degree to which the manager attempts to identify needs for training and remedial measures and the degree to which he takes action on them.
- ix The regularity and comprehensiveness of his managerial review sessions (discussed in greater detail later in this section).

All of these are measureable, sometimes with the help of an observer or adviser, and each has an influence upon both effectiveness and motivation. Some of these measures are relatively qualitative and subjective but with the help of someone external to the unit in question, e.g. a personnel department staff member, they can be measured well enough to provide a reference.

#### **c THE INFORMATION AND COMMUNICATION PROCESSES WHICH THE MANAGER ESTABLISHES**

Another managerial role where systematic improvements in operation are possible and measureable is in the area of communication.

One of the most important roles filled by a manager is that of a communicator. Most of the manager's time is spent in dealing with other people, both senior and junior to him. Much of his success as a manager depends on how well he can communicate with those people about ideas, needs, resources, priorities, performance and so on. The manager should, therefore, review his own performance in this area carefully, especially because he is, in effect, the nerve centre for his unit of responsibility.

Some useful indicators would be:

- i the number of times and the length of time that information is misdirected or lost;
- ii the length of time it takes to answer requests for information;
- iii the number of times that communications are returned for further clarification;
- iv the frequency with which information directly related to a decision is received after the decision has been made;
- v The number of complaints (direct and indirect) from subordinates regarding the manager's monopolizing of information;
- vi the extent to which a manager's personal information system fills his needs for information;
- vii the degree to which people within the organization understand the goals and objectives of the organization and of the people to whom they report;
- viii the extent to which a senior manager keeps his people informed of events, both inside and outside the organization, which might have some impact upon their motivation and ability to do the job; and
- ix the frequency with which a manager finds that he has not been kept informed by his subordinates of things which he should know, so that he can adapt and adjust to maintain an efficient and effective operation.

Most of these indicators are subjective and are useful to individual managers as tools for management improvement. Few of them are useful to higher level managers as evaluative devices but higher level managers can measure the junior manager's ability to establish and accomplish objectives and to carry out an operation which fulfills the purpose of his job. These indicators also provide some guidelines for the type of activities which managers should be undertaking and which should be expected by the next highest level of management.

#### **d THE ALLOCATION OF RESOURCES**

Ideally, resources should be allocated strictly on the basis of job needs and resource availabilities. However, as a protective measure, most managers have a tendency



to overestimate resource requirements. This tendency may be more pronounced if communications are poor and if the level of uncertainty is high. Managers should be able to gauge their performance in allocating resources rather accurately using the following indicators:

- i the percentage by which actual expenditures exceed or fall below past budget estimates;
- ii the number of times additional resources are requested and the percentage by which total spending exceeds original budget requests;
- iii the amount of idle time of both people and equipment;
- iv the degree to which equipment down time affects routine operations;
- v the extent of overtime or, the converse, participation in apparently filler activities; and
- vi the number of complaints received about over-work, rushing or inadequate service.

Regardless of the measurement systems used, a manager is, to a large extent, dependent upon accurate information from his staff in this area. The more individuals can be made to feel responsible for obtaining and transmitting accurate data and for initiating their own improvements, the better is the system of measurement which will emerge. The effective assignment of responsibility and delegation of authority are crucial for ensuring that resources are used properly and not banked up for contingencies that may not occur. The manager must have as clear a plan of activity as possible and must be able to influence people at higher levels, at his own level and below his own level, if he is to achieve his goals with optimum efficiency and effectiveness.

#### c HANDLING EMERGENCIES OR CRISES

An important role of managers, and one which should be considered carefully when reviewing performance, is the ability to handle unexpected disturbances. Problems which arise suddenly can interfere with smooth operations and prevent a manager's unit from attaining its objectives. Storms, labour problems, mechanical problems, unexpected changes in client demands, action by other levels of government, citizen unrest, or the emergence of major economic problems are examples of disturbances which may require special emergency reaction. Disturbances such as these can create problems with the allocation of resources. An effective manager tries to minimize these problems by ensuring that he has sufficient personnel and financial slack to cope with emergencies. This may involve the establishment of a pool of extra resources assigned on a total organizational basis.

The nature of emergencies is such that developing reliable and valid measurements of managerial effectiveness in dealing with them is a difficult task. The severity,

location, time of year, degree of danger to life and property, etc., all contribute to making emergency situations unique. No one measure can be relied upon to give the manager a complete picture of the impact of the efforts of his or her unit in dealing with a crisis. Some appreciation of performance effectiveness can be gained, however, by seeking answers to the following questions.

- i How quickly was the emergency identified?
- ii Did the appropriate person accept responsibility for dealing with the emergency without hesitation?
- iii How long did it take before corrective action was taken?
- iv Was the corrective action appropriate and effective?
- v How long was it before normal services were restored?
- vi Following an emergency, how long did it take for the manager's unit to resume normal functioning?

#### 2 Inter-unit<sup>2</sup> management processes and procedures

As previously discussed, local government time and money are often wasted due to unclear responsibility, delays in approvals, failures of communication and general confusion concerning procedures. Probably a great deal of both council and administration's time is spent in inefficient and often ineffective processes and procedures.

A procedure can be defined as the recommended and agreed upon method for getting a specific job done. Thus, there is a procedure for zoning changes, one for handling correspondence in a department, one for hiring new staff and so on. However, in most local governments, procedures are not well defined, or are repetitive, clumsy and wasteful of time and resources. Irrespective of whether a particular procedure is formalised or is informal, a manager should feel that the process for undertaking a task is efficient. It is part of a manager's responsibility to look closely at procedures, consider how they could be improved, and initiate programs for change where necessary.<sup>3</sup>

Processes — descriptions of the interactions which *actually* take place, are important for several reasons. In many cases, higher level managers direct many diverse functions and need to establish ongoing procedures which they can monitor rather than supervise in a detailed fashion. Many organizational procedures are centralized, e.g. the budget, manpower selection, training and appraisal and new project approval. The behaviour of managers and the productivity of organizational units may depend upon the efficiency and effectiveness of the procedures involved. Thus, the actual processes of operation in response to each of the procedures is important, and measurement of the effectiveness and efficiency of each of those management processes is necessary.

Before a process can be analyzed, its purpose must be perfectly clear. The source of the process or the way it has evolved should then be identified, as should the individuals who would be directly affected by any

2 The term 'unit' is used here to represent any part of an organization which has a distinct responsibility, e.g. a department, a branch or a division.

3 Examples of goals and objectives developed to establish new processes and new organizational roles are given in Appendix 1.

changes. The time involved, satisfaction with the process in meeting user department needs, degree of co-operation and co-ordination and impact upon other processes, are all measures which might be used.

The effectiveness of many support services (those services supplied by one internal department to another), can be measured by the degree to which they assist the operational manager to save time, to provide a service, or to complete a project economically. An example would be the availability of financial information which tells a manager what he needs to know in order to control and effectively manage his expenditures, with minimum time-consuming input of information on the part of the manager himself and with optimum efficiency in the process.<sup>4</sup>

Another major area of support lies within the jurisdiction of municipal personnel departments. These essentially emerged to fill roles which busy line managers were unable to handle effectively. Personnel departments exist primarily to supply managers with the human resources they need and to advise top management regarding the effective utilization of those resources. Thus the managers who use the personnel service must be involved in the evaluation and improvement of that service. Personnel departments should not assume a control role in regard to numbers and qualifications of personnel, for by assuming that role, personnel departments remove an essential part of the line managers' responsibility for efficient operation. Relieved of that responsibility to economize, line managers are likely to fight for all the human resources they can get. Councils find it attractive to delegate a control role rather than a monitoring role to personnel departments but, by so doing, they are essentially removing an important aspect of the line managers' responsibility. The same argument holds true for financial control systems; attempts to control rather than to monitor and keep managers informed are very common.

In almost every support service area, the managers who supply the service and the managers who use the service or product must together define the type of service or product that is most appropriate, usually with help and advice from other managers within their respective units.

User satisfaction is probably the only true way to measure the effectiveness of a product, service or support service. Unfortunately, formal measures of user satisfaction are usually lacking in local government and, in fact, only infrequently do users and suppliers get together to determine the initial objectives for the service. As a result, support services are generally inadequate and poorly defined in local government. Duplication frequently results and some support departments or divisions are under-employed.

An example of a management support process which can be evaluated is a personnel selection and hiring process which takes minimum time to reach a desired result in providing management with the type of human resources they need. The effectiveness of the process can be judged by balancing the relative costs of a longer and more detailed hiring process, as determined by the per-

sonnel department, against the potential benefits of that longer process, as determined by line managers.

Another example of process effectiveness involves the measurement of the time required to formulate and create firm municipal plans, e.g., for a subdivision, and to obtain approval from council for the implementation of the project. Reduction in the time required to formulate plans for a subdivision, and to present the plans to council, could be a measure of improvement for a planner and could result in dividends from lower land costs to citizens.<sup>5</sup>

Delays in municipal projects often arise directly from council's reticence to approve submissions. Effective processes for council approval can help to minimize those delays.

An effective process is probably one which:

- a requires the minimum number of reviews by council;
- b outlines a process which will include all the information council is likely to require;
- c makes clear to council and administration the cost of delays in approval;
- d is as simple and straightforward as possible;
- e allows council the necessary time for deliberation; and
- f presents an optimum number of alternatives.

As can be seen from the above examples, most measures or indices of management process effectiveness and efficiency are not absolute measures, but rather are involved with improvements in time, cost effectiveness, or resource utilization.

The measurement of the effectiveness and efficiency of processes is almost necessarily relative, but managers can fairly easily estimate the time they are spending on routine tasks and thus can determine how much their use of time has improved after changes in procedures are introduced. Some real benefits from management improvement objectives can be realized in the areas of time required for decision-making and in the appropriate allocation of decision-making responsibility, e.g. when meetings are held to make decisions when established processes and procedures should suffice.

Estimates of gains from improved processes and procedures are usually rough and often only qualitative rather than quantitative, but such measurements are valuable if they direct the manager's attention to an evaluation of the impact of processes and procedures and encourage improvement.<sup>6</sup>

Some examples of such measures are as follows:

- a an estimate of the cost of implementing the new procedure compared to the cost of inefficiency, etc.,

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4 Examples of specific goals and objectives for support departments e.g. finance are given in Appendix 1.

5 Examples of cases in which planning and engineering departments were able to clarify their roles of responsibility through goals and objectives are given in Appendix 1.

6 Examples of detailed process oriented goals and objectives are given in Appendix 1.



- that would have been incurred without the change;
- b the satisfaction of other people involved with the new procedures, (councillors, other managers, developers, citizens, etc.);
- c the satisfaction of users, particularly of support services (this information can be gained informally or through simple questionnaires);
- d an estimate of the time a manager currently spends on routine tasks compared to the time he spent before the procedure was introduced;
- e the frequency of complaints after, as opposed to before, the change in procedures;
- f the time saved that formerly was consumed in meetings held to make repetitive decisions;
- g the time saved that formerly was spent in making joint decisions that now are made by one person; and
- h the decrease, resulting from the change in procedures, in the number of decisions that are delayed, or avoided and an estimate of the consequent saving.

Inter-unit managerial procedures and processes play an increasingly important role in local government management in co-ordinating activities between divisions in departments and between different departments. Many of the problems in the area of co-ordination begin with managers — particularly in support service areas — who cannot or will not make an effort to co-ordinate their efforts with those of other managers.

Measures which are useful in the area of co-ordination are:

- a the number of occurrences in which the service provided by the manager's unit is the cause of delays in the operation of other units;
- b the number of complaints due to overlapping responsibilities or uncertainty about responsibility;
- c the frequency with which plans or procedures have to be changed after they have been initiated;
- d the frequency with which activities, or directives for action, are communicated to less than the total number of sections to be involved; or
- e the reverse, the frequency with which the communication lines are clogged with information which is not used.

Time and effectiveness costs and improvements are hard to tabulate in these areas, but the need for improvement and potential means of improvement are easy to identify, and it is generally fairly easy to judge when an improvement has been made.

Management improvements in many of these areas are not immediately reflected in monetary saving, which is of primary importance to council. Nevertheless, over the long run, improvements in management process and procedure effectiveness may pay greater dividends than any other approach to improving the economies and effectiveness of service delivery.

### 3 Processes of decision-making at the council level

Councils in local government perform two very distinct roles, each of which requires specific management pro-

cesses. On the one hand council is a representative body, which has the political responsibility of resolving conflict and supplying a base for co-operative endeavours within the community, and on the other it must make the executive decisions pertaining to the operation of a large and diverse service industry. The following discussion will concentrate first on the political, and second, on the managerial role of council.

#### COUNCIL'S POLITICAL ROLE

To perform the political role, councillors need input from their constituents. They need to be attuned to the feelings and desires of the people they represent regarding the type of services which should be supplied, the amount citizens are prepared to pay for those services, and the desired immediate direction of the community. For council deliberations to be effective, an open forum should exist where each councillor can truly represent his constituents. Also, the whole political operation of council needs to be governed by regulations which protect the rights of minorities. The processes involved are mainly those concerned with communication, open debate, determination of consensus, and reviews to ensure that all citizens are being treated fairly. As local government has become more important the political role has become more significant.

From the municipal administrator's perspective the political role of council may be frustrating and may often seem to be contributing to inefficiency and perhaps even to ineffectiveness, particularly over the long term. In reality, of course, council, in its political role, must make decisions regarding the direction of local government efforts and allocate the appropriate resources. Given those directions and priorities, it is council's management role to ensure that the required services and facilities are supplied as economically as possible.

This paper is primarily concerned with the management role of local government in supplying services to the community. However, managers do need definitive targets, and the determination of targets for local government services is a part of the political role. Thus, before turning to a discussion of the processes involved in managing the delivery of local government services, it seems appropriate to discuss the problems which seem to be involved in determining those management targets.

Theoretically, representative government provides an institution which is capable of resolving conflict and of planning community growth. In fact, of course, planning decisions cannot be made in a vacuum, clear alternatives for action are needed so that people can react to them. The party system at the federal and provincial levels results in at least some degree of identification of alternatives in the form of platforms, which supposedly commit each party to act in a certain way. No such mechanism exists at the local level in most Canadian municipalities.

Most municipalities also do not publicly identify their goals and objectives in a meaningful way. As a consequence, the political basis which the municipality supplies for the effective performance of its management role is confused and incoherent.



There is no question that the establishment of corporate goals and broad objectives for local government is a high priority requirement for the fulfillment of both the political and managerial responsibilities of council. (A number of alternatives for this corporate process have been discussed in some detail in an earlier publication.<sup>7</sup>)

It is easy to simplify the problem of goal and objective determination in local government by appealing to a rational management perspective. What must be realized, however, is that municipal goals and broad objectives must have a political origin or local government cannot fulfill its purpose.

In private corporations, goals and objectives have a more rational, economic management base and political factors only come into prominence as potential constraints upon management. In the political sphere, the very existence of processes of public to council, and council to public communication, and of methods of determining council goals and objectives are, by themselves, indications or measures of effective management. Public surveys can be used fairly regularly to obtain information on the degree to which the public is in agreement with council decisions and with the goals and broad objectives of the municipality, assuming that they exist. Any evidence of discrimination against a minority (usually taking place in the form of unequal treatment without appropriate reimbursement) is an indication that council is not playing its political role effectively.

Before proceeding with an analysis of council's management role, there is a fundamental factor relating to the political role that deserves emphasis. Councillors, no more or less than other people, react to incentives, and will perform those activities and make those decisions for which they receive the greatest recognition and/or rewards. There is little value to be gained from speculating about what is 'good' for municipalities unless councillors have some incentive to operate in the recommended way and have a firm idea of what effective management means in municipalities.

Frequently, particularly in small municipalities, a council position carries with it a degree of power to influence events in the community. Firm municipal goals and objectives may act as a constraining influence upon the exercise of such power. Thus, there is actually a negative incentive for long-range planning. Even where the councillor has no desire or opportunity for personal gain, the development and continuous updating of municipal goals and objectives is hard work and pay-offs are relatively long-term. Councillors frequently do not have the management experience or sufficient understanding of their own roles to participate effectively in such a process.

Consequently, incentives for such initiatives do not exist locally, and it seems that both the capability and the responsibility for encouraging such processes lies with upper levels of government. Provincial governments cannot make local decisions, as they have discovered in the past; they must assign that responsibility to

local government. Unfortunately, local councillors need incentives to carry out their political and management roles – to get involved with processes which have the potential to bring about effective management. Only provincial governments have the constitutional power and authority to produce appropriate incentives.

Some specific questions which should help to reveal council's effectiveness in performing the political role, include the following.

- a Has the council established community goals and broad objectives?
- b Are administrators clear on their respective responsibilities for achieving those goals and objectives?
- c Have alternatives for providing each service been clearly identified and examined in every case and has the necessary public awareness been achieved and input obtained?
- d Do councillors feel that there is any incentive for efficient and effective management?
- e Is council able to keep accurately informed about public opinion on various issues?

#### COUNCIL'S MANAGERIAL ROLE

Having established the importance of council's political role, this discussion will now center around the management role of council in supplying the appropriate services.<sup>8</sup> Councils employ municipal administrators to carry out the service delivery function. As functional managers, however, councillors need to supply their administration with clear direction and policies for dealing with the public. They also need to provide incentives for doing the job effectively. They must examine administrative programs to ensure that those programs are meeting the high priority needs and they need evidence that their administrators are capable of operating in an efficient and effective manner. To be more specific, a number of council responsibilities can be identified.

- a The Selection and Development of Effective Administrators

Council is responsible for hiring, for assigning responsibility to, and for evaluating the effectiveness of its top administrators. Council is also responsible for rewarding effective behaviour and for removing incompetent managers. Unless council initiates a process which requires that administrators have clear goals and objectives for their own jobs, and for the programs under their control, it has few reference points from which to evaluate administrative effectiveness. Of course, performance in the delivery of services can be measured in terms of client feedback – citizen feedback in the case of operational service departments, and administrative 'user' feedback in the case of internal support services. This results-oriented approach is important, however,

7 See *The LGMP Experience – Guidelines For Organizational Change in Local Government* (see order sheet on last page).

8 A much more detailed discussion of council roles and both political and management problem areas is contained in *The LGMP Experience: Phase II* (see last page of this book for reference).

it does not help to evaluate whether or not the most appropriate service is being supplied, nor does it indicate how effectively the administrators are managing in terms of efficient use of resources.

#### b Clarification of Administrative Role

Councils need to clarify the corporate role that they wish top administrators to play, for example, do they wish their top administrators to act as a corporate management team, viewing municipal requirements for service on a holistic basis, submitting recommendations to council and reacting to council requests as a team? The fact that a council has clarified such roles and has ensured that updated procedures exist to carry them out is, itself, an indication of effective management. Thus a measure of council effectiveness is the existence of clear roles for administrators and of methods of evaluating the effectiveness of top administrators.

#### c Priority Setting

Unless councils have an adequate process for priority setting, it is unlikely that expenditures will be controlled effectively. Really effective priority setting probably requires the re-evaluation of a proportion of existing administrative programs each year. By looking at the rationale for existing programs as well as for new programs, council's discretionary power is increased. With an administration which is operating on a program format, and with clear ongoing goals and objectives for each program, council is in a much better position to determine whether or not funds are allocated wisely. Thus the existence of clear goals and objectives at every management level, including council, is a measure of organizational effectiveness, as is the existence of a clear definition of purpose and objectives for programs and the existence of definite measures of program achievement.

#### d Delegation of Authority

Interference by councillors in administrative areas of responsibility is common and it undercuts the ability of top administrators to manage their own operations. Thus, councils need to assign responsibility and delegate authority for service delivery. The performance of administrators can be evaluated in terms of the accomplishment of stated goals and objectives. Measurement of the degree to which responsibility is clear and operational goals and objectives exist, is possible through a management process and resource utilization audit, carried out by an internal audit function or by a consultant group. Council's effectiveness in dealing with the administration can quite readily and accurately be measured by administrative responses. A measurement of the degree to which councillors are aware of specific administrative responsibilities and programs is also available.

#### 4 The processes that aid the organization to adapt to environmental change

Local governments are in the centre of a rapidly changing world. Changes in community patterns, transportation modes and requirements, social values, citizen needs, and quality of life criteria, all affect local government far more than any other level of government.

Political demands and potential problems have increased dynamically. From primarily a maintenance function, local government is gradually becoming the court of main resort for citizens. Federal and provincial governments are too remote and they do not have the same impact upon quality of life as local government.

Administrators are performing large scale and complex management functions and must cope with the changes in demand for services created as a result of both the on-going technology and social revolutions. Local governments must seek ways to acknowledge and continuously adapt to such massive changes.

One necessity in this process is an awareness that an anticipative or planning role is important. This should extend beyond the development of forecasts and a plan. Local government has a most crucial need for the development of internal decision-making processes and for processes of interaction with other levels of government to facilitate both environmental control and adaptation to environmental change.

At the top administrative level, a team of experts, concerned with all the various aspects of the municipality's growth, can aid in the adaptive process and can co-ordinate administrative reaction to change. When working closely with the elected body, which makes the political decisions, this group can provide a forum which can at least consider most questions and can anticipate to some degree in the light of current and past experience.

Provincial-municipal liaison committees composed of alert and informed municipal councillors, backed by administrative teams, have the potential to contribute to a joint, adaptive approach to changing conditions. The best way to combat uncertainty is through a high level of sensitivity to the environment, and the best way to create the necessary awareness is through mutual discussion between people with a high interest in and knowledge of the needs of the community.

Routine educational programs for council members, particularly new councillors, can assist them greatly in playing effective roles. Councillors, particularly in small municipalities, may have personal reasons for maintaining the status quo, in such cases external rewards (e.g. by the Province) may be required to encourage an interest in management improvement.

Councils need information in order to plan. That information can come in the form of trend analysis of growth and service requirements, and/or in the form of analysis of cities with similar growth patterns. Councils which are making decisions without this type of information are necessarily performing ineffectively. An effective organization is one which is aware of environmental change and which keeps itself sufficiently flexible to meet changing needs. A useful measure of council effectiveness in this area may simply be the existence of a desire to be innovative, to plan and to improve management in an attempt to develop an effective organization.



## REVIEWING PROCESSES, PROCEDURES AND MANAGERIAL PERFORMANCE

As the preceding discussion has indicated, there are many areas of management activity and practice which can be assessed and improved in the interests of the final product or service. Although they affect the final product, in many cases it is more meaningful to identify and measure these activities directly, than to measure the final output and then to work backwards to the cause of any problem.

Although it is not a fashionable philosophy, the LGMP has taken the inside-out approach and has emphasized individual manager improvement and improvement in managerial processes at all management levels.<sup>9</sup> This approach has centered on the development of a goals and objectives system in the organization. The experience has suggested that goals and objectives are a useful medium, particularly for establishing the prerequisites for management performance measurement. These prerequisites include the establishment of co-operation and communication links, the identification of areas where mutual problem-solving, delegation and co-ordination are needed, and the clarification of roles and areas of responsibility.

Goals and objectives are especially useful in establishing a basis for measuring the efficiency and effectiveness of areas of management in which output measures are not directly feasible. The financial information system, for instance, is difficult to evaluate on a quantitative basis. It can, however, be measured by the degree to which it fulfills its function or purpose in contributing the type of information managers require. Goals and objectives can also be helpful in providing an operational definition of purpose, in ensuring that the system is geared to achieve that purpose, and in ensuring that divergencies are highlighted for corrective action. In fact, objectives carefully planned and agreed upon, sometimes with input from the person or people receiving the product or service, can themselves become a measurement tool. In cases where objectives are the measurement vehicle, measurement is based upon the idea that the effectiveness of the work unit is directly related to the effectiveness and efficiency with which those objectives are achieved.

The potential for evaluation is achieved when each manager takes the time to determine goals and objectives for his operation and ensures that these are inter-related and integrated with the goals and objectives of other managers. This is most useful when the process is carried throughout the organization, with goals and objectives being developed at each management level. Integrated goals and objectives provide an ideal framework for analyzing the operation of an organization. The very fact that inter-related goals and objectives exist for each manager and program indicates that some control processes are operating.

It is important to recognize, however, that goals and objectives are essentially useless unless they are incorporated as a part of the management process. A major step in that direction is the development of an on-going process of management reviews.

Experiences during the LGMP have confirmed that management processes and results should both be kept in the forefront so that managers are continuously concerned with management improvement. This means that managers should carry out on-going reviews of the management effectiveness of both themselves and their staff. In addition, however, managers need to consider the full scope of their own and their staff's role and accomplishments. This requires a periodic comprehensive review of all aspects of the management operation.

Since an effective review, oriented toward management improvement, can make a fundamental contribution to management, a suggested review process is covered in detail over the next few pages. On-going and periodic reviews will be discussed in turn. Some guidelines for team processes and communication will also be discussed.

### The on-going review

Part of a manager's job is to monitor progress, to be sensitive to change, and to sense the changes, events and problems which are significant. He is thus constantly reviewing progress, checking with the people who report to him and setting and revising objectives to improve effectiveness. All these activities are part of an on-going review process, which contributes to the more formal scheduled review of all objectives, and to the state of integration, co-ordination and co-operation between managers.

The on-going review is as important as the scheduled review. As conditions change and unforeseen problems arise, objectives may have to be modified to avoid the expenditure of time and resources on unnecessary or inappropriate activities. Since these changes do not always coincide with scheduled reviews, the on-going review process is necessary to ensure adaptation and flexibility. In addition, on-going reviews keep important objectives in the foreground, allowing managers to become proactive rather than reactive in dealing with problems which arise.

Communication is obviously a vital aspect of the on-going review process:

- a to identify departures from the expected;
- b to let senior managers and others affected, know about such departures and their effects; and
- c to facilitate the continuous monitoring of problem areas or potential problem areas.

Open communication and trust between managers at all levels is essential for honest identification of problems and their causes. The on-going review process itself can be seen as a form of communication, vital for both individual development and organizational health and effectiveness. A review is not a weapon and care must be taken that it is not treated like one or else communication will be blocked.

One problem often encountered is the question of how to modify objectives on the strength of information

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9 A description of LGMP experiments and progress with measurement in the four Project Municipalities is given in Appendix 1.



obtained through the on-going review process. Where there is good communication between senior and junior managers, objectives are fairly easily modified in accordance with new situations. During the scheduled review meeting a careful look can be taken at why the modifications were necessary. There is, of course, the danger of modifying objectives too frequently so that they become meaningless and do not give direction to activities. This is no better than the case where managers do not review objectives in an on-going way and remain frozen into inappropriate programs until the review date. The answer seems to be to adopt 'management by exception', to some extent, making on-going and scheduled reviews complementary. Each manager will be guided by his trusted sources of information, the importance of the changes in the situation, the connection between his and others' objectives, and by conferring with both his immediate junior and senior managers. Of course, to modify objectives simply in order to be able to point to accomplished objectives at the next review date, is to misunderstand and misuse the on-going review.

On-going reviews should not have set formats, but should take place continually. This is important because the manager's behaviour, and the objectives which he sets, are not pre-determined once and for all, but are living things, likely to come under differing pressures in the everyday working world. For this reason, the manager needs to constantly review his own performance and review the relevance of his goals and objectives and the status of his progress in their direction. This may involve setting new objectives and revising old ones as required. Effective management is a dynamic, on-going operation – goals and objectives are tools to provide direction and continuity for managers.

#### The scheduled review

In an ideal world, a scheduled review should not be needed for anything other than a check on pre-set deadlines. The everyday work situation, however, is not ideal; work falls behind, perspectives are controlled by events, communications break down, feedback is not forthcoming, etc. As a consequence, the scheduled review becomes an important part of goal and objective setting. It should be emphasized, however, that the scheduled review is not intended as a substitute for a continuous, on-going review of goals and objectives. It is intended rather as an extension of such a process.

When objectives are set, definite steps toward these objectives must be specified where applicable, and definite review dates determined. Although different objectives will operate in different timeframes, a regular meeting between managers, to review general progress and specific objectives, is essential for a number of reasons.

- 1 Scheduled reviews provide a framework for managers to think about their jobs and future activities. They help to provide some perspective for gauging progress, dealing with problems, and allocating resources. The first task during a scheduled review is really a review of the purpose of programs and a

redefinition of management roles and functions. Unless managers consciously think about such issues they are neglected and whole programs or management roles may become misdirected.

- 2 The usefulness of goals and objectives is based on their ability to provide guidelines and yardsticks for managers. This function is facilitated by a regularly scheduled meeting, enabling managers to step back and take stock of the situation, in company with superiors, subordinates and colleagues.
- 3 Since objectives should usually be stated in terms of a definite timeframe, regular reviews can help managers to keep track of target dates and to schedule their activities more effectively.
- 4 Where the on-going review is being neglected, the scheduled reviews can serve as a vehicle for bringing managers together to identify problems and to arrive at strategies for solving them.
- 5 A regularly scheduled review also provides a means for following up on new ideas or strategies and for evaluating them. It allows for continuing identification of problems or problem areas and for consistent monitoring of how well goals and objectives are designed to solve those problems.
- 6 A scheduled review can be seen as the completion of the goal and objective setting cycle, providing the basis for setting new targets where necessary. It also ensures that valuable procedures and effective management styles are not discarded or changed, and that subordinates are provided with sufficient authority and resources to carry out their objectives.

Scheduled reviews are more formalized than on-going reviews. They typically involve at least a one-to-one interview between the superior and subordinate. This discussion should focus on the accomplishments and problems of the junior manager in setting and achieving his goals and objectives.

Scheduled reviews may also involve team discussions. Here, managers at a similar level in the organization sit down to discuss common goals and objectives. The purpose of this discussion is to improve communications, to identify common problems, e.g. work overlaps or unclear responsibilities, and to find mutually acceptable solutions to problems concerning co-operation and the co-ordination of activities.

The main purpose of both on-going and scheduled reviews is to constructively examine progress within the context of goals and objectives for:

- a personal development of managers, their skills and job satisfaction; and
- b development of a strong organization, where managers co-operate in setting targets, in achieving them, and in solving problems.

Thus reviews are an important part of the feedback system which helps managers to do a better job.

Since the review process, as part of the goal and objective setting cycle, is also an on-going activity, there may be some doubt about where it should begin. The LGMP Team believes that after the initial review, in which the

senior manager provides the guidance and impetus for both on-going and scheduled reviews, the process should begin with the lowest management level. Reviews at higher levels are based on the practical problems identified at lower levels. The problems which have been identified at lower levels may actually have their cause at higher levels or at least help may be needed from higher levels in identifying solutions.

In addition to reviewing the goals and objectives of individual managers, the regular review process should also encompass the following activities.

- a A review of the purpose, effectiveness and priorities of all committees, including the committee of department heads.
- b A review of responsibilities, programs and resource allocation.
- c A review of progress toward broad objectives that involve council decisions.

The frequency of the review process interviews will depend on a number of factors, including the timeframe of objectives, the difficulty of introducing the process, and so on. Of course, the period between scheduled review processes must be neither too short for useful evaluation to take place nor so long that information is lost. Recommended spacing of review interviews might be:

- a annual review interviews, if the task is reasonably stable and the process of on-going reviews is well established;
- b semi-annual review interviews, spaced to coincide with budget reviews so that budget and cost objectives can be examined; or
- c quarterly review interviews, also to coincide with budget reviews. Quarterly reviews are recommended in an organization undergoing change or where the process is not yet well established.

The goal and objective review process can have a considerable impact on management improvement, development and performance. Through improvements in communication, task orientation, organization, etc., the process can contribute significantly to organizational improvement through better management.

The following are some of the more specific ways in which the process may contribute to management. These include:

- 1 managerial pay-off; and
  - 2 organizational pay-off.
- 1 **Managerial pay-off**

#### THE SENIOR MANAGER

An effectively conducted review interview is one which involves both the senior and the junior manager in a process of problem identification and problem solving. The abilities of both are tapped and the senior manager is able to gain from the junior manager's ideas and to understand the actual operation of the organization under his control to a greater extent. The LGMP experience has indicated that managers who do not carry out regular reviews, generally lack an appreciation of the

problems encountered by people reporting directly to them, and certainly do not appreciate the problems of the individuals two or three organizational levels lower.

- a By informally reviewing his subordinates' career plans, perceived training needs, job satisfaction or dissatisfaction, a senior manager can get an idea of where his people want to go and how to help them to get there. Through developing this kind of understanding, senior managers can help to ensure that the people in the organization are satisfied and working to full potential.
- b It gives him an opportunity to develop an understanding of junior manager or employee problems, and the reasons why forecasts or objectives were inaccurate. Problems can be identified and the basic causes isolated through input from all managers involved. If responsibilities are not clear or goals and objectives are not appropriate, task oriented discussions with subordinates should make this apparent. The senior manager may find that he is not communicating as well as he should with his subordinates. This information is vital to senior managers, and should be one of the main concerns during the review process.
- c The senior manager is able to detect areas of managerial strength and weakness in his subordinates and to advise them of ways in which they might improve their management capability. In a frank, open, review interview he should also be able to obtain information from his juniors about areas where they feel he is not providing them with direction or the necessary resources to do the job. Thus, the organizational benefits of developing and improving management skills can be optimized by managers who are aware of the potential of the review process.
- d The senior manager should clarify the opportunities which exist for training, promotion, and transfer of his subordinates. Good managers are probably those who contribute a great deal to the development of their subordinates since this helps to maintain a highly mobile organization, composed of able people. Loss of managers to other organizations is not necessarily bad since it provides openings for movement from lower levels and ensures a fresh flow of ideas from replacements.
- e Periodic reviews provide a degree of control for the senior manager. Without this element of control most managers would be loath to delegate. With a mutual understanding that any serious departures from planned objectives will be brought to his attention immediately, the senior manager is really taking fewer risks.

#### THE JUNIOR MANAGER

From the junior manager's point of view, both regular and on-going reviews of goals and objectives with his superior have several advantages that he can exploit in the following ways.

- a He is especially asked to focus on the task he is doing and to identify those factors which prevent him from doing it most effectively. Through open discussions with his superior he is able to have some impact upon



decisions which will influence his own effectiveness. He is being involved as a decision-maker in areas of the operation which he alone knows best.

- b Preparation for the periodic review involves identification of what his career desires are and what training or transfers he would like. This should be used by the junior manager as an opportunity to clarify his personal goals and to think about what he wants to do with his career. Junior managers with some sense of purpose are both happier individuals and better managers.
- c The junior manager can sharpen his skills during the review process by searching out problem areas and their causes. Where causes include unclear delineation of responsibility, lack of sufficient authority or result from action of superiors or peers, he can suggest action, or initiate joint problem solving. The dialogue involved in this aspect of the review process can be instructive for junior managers and can contribute to organizational effectiveness.
- d The opportunity to explain why objectives were not met or why forecasts were inaccurate (either too high or too low), enables junior managers to clear up or avoid misunderstandings. He can thus use the review interview to explain his record, and if possible, to justify it. He can also take the opportunity to suggest better methods of measuring both his managerial and operational performance.
- e The periodic reviews represent an opportunity for the junior manager to check direction and ensure that he is continuing to devote his efforts to tasks which have optimum pay-off for the organization. If he is overloaded this can be identified. If he feels he is not being fully utilized he can ask for more or for different work.
- f He is able to learn from his superior what his areas of strength or weakness are, and can develop ways of improving his own approach to management. While he knows that current appraisals may reflect those areas of weakness, he also has the opportunity to improve in the future. Managers who do not carry out reviews with their subordinates limit opportunities for their development. Likewise, junior managers who seek to disguise weaknesses and difficulties, rather than taking steps to remedy them, do themselves a disservice.

## 2 Organizational pay-off

A positive review process, successfully introduced, can assist in the identification of organizational strengths and weaknesses. These strengths and weaknesses may involve organizational structure, support services, services to the public, processes and procedures, training and development, or morale. The review provides a technique for problem identification. The goal and objective setting process can then be used to set objectives to overcome those problems and to emphasize strengths within the organization.

Few of the major organizational pay-offs from a review process are possible without some centralized managerial authority, either in the form of a chief administrative

officer or an effectively functioning committee of department heads. Co-ordination and co-operation are required for the development of better support services and the improvement of major organizational processes such as the budget or the information and communication system. When major problems in operation are identified, e.g. inadequate information systems, someone must have the clear responsibility and authority to take action.

It cannot be stressed enough that the success of the review process depends entirely upon the individuals involved. If it is approached with honesty, openness and a desire to learn and improve, then it can be a valuable and rewarding experience for all concerned. For this to happen, an emphasis must be placed on communication and mutual understanding. When the process is working well, the senior manager is not seen as a controller or as a medium for organizational reward or punishment. Rather, he is seen as a support for the junior manager; it is his job to understand the duties of the junior manager, to inspire him and to ensure that he has the necessary capacity to carry out these duties.

Consequently, a review process is not an additional burden which is added to a manager's work load; it is a process which includes the things that an effective manager should already be doing. This is because a review and evaluation of managerial performance is a crucial, fundamental and necessary aspect of effective management itself.

## SUMMARY

Prior to the discussion in this section, the concept of performance measurement has been based on a view of the organization as a system or 'black box', with inputs and outputs that can be measured and inter-related. One of the assumptions inherent in this view is that the function of management is to transpose inputs into outputs as effectively as possible. However, much management activity is only indirectly related to this role. Managers also have co-ordinative, co-operative and organizational and individual development roles. These roles are particularly important in support functions, for instance, that have no direct output from the organization. Also, managers, are not always in direct control of the output from their units. Management is not a solitary activity but is often a dependent one. A close look at management activities suggests that the 'black box' view contributes very little that is helpful to individual managers who are attempting to improve their performance.

Process oriented measures attempt to overcome these difficulties by moving inside the organization to focus on individual managers, the roles they perform, the responsibilities they fulfill and the processes and procedures that they establish to help them carry out those responsibilities. Moving inside the organization makes performance measurement more meaningful and helpful to individual managers, however, in doing so it also changes the basic performance measurement characteristics. The 'black box' view allows the organization to be seen as a closed production system. Inputs and outputs can be defined as entities and related. The effect



of a program or the cost of garbage collection can be determined objectively, in the sense that the resources can be divorced from the organization itself. The measurement of management activity and procedures, however, cannot effectively be divorced from the organization, because in this case the measurement *is* the activity. The measurement itself becomes an integral part of management – the process of on-going organizational and individual improvement.

For discussion in this section, local government management has been divided into different activity levels; the individual manager, with his divergent activities, roles and responsibilities; inter-unit activities; and activities at the council and organizational levels. Activities at these different levels are crucial but are not so easily measured in the objective sense. An approach considered useful was the emphasis of goals and objectives in the management process. The principal benefit of a goals and objectives approach is that it clarifies and changes the management process itself rather than merely reporting on the effects of undefined management activities.

The LGMP Team firmly believe that goal and objective setting is extremely valuable as a technique:

- 1 to improve communication and co-ordination and to develop an integrated sense of direction;
- 2 to obtain optimum input from all organizational members and to provide a means for recognition of that input;
- 3 to identify needs for change and improvement and to formalize a process of change; and

- 4 to assist in the personal and managerial development and growth of all members of the organization.

To provide continuity to the measurement process and to evaluate performance and identify problems in the achievement of objectives, it is necessary that goals and objectives be reviewed periodically. This review process should be motivational, informative and educational for the managers involved. It should also contribute to overall organizational effectiveness.

The review process has been discussed in this section because it is an integral part of the goal and objective cycle and is basically a tool for management development and improvement. It is an integrated system of evaluation for all elements of the organization. One of the principal benefits of the review process is that it places the prime responsibility for that evaluation on the individual managers within the organization. As an approach to performance measurement it should help capable managers to do a better job.



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# Part VII





Several different approaches to performance measurement have been discussed in this paper including input, output, fiscal and internal process oriented measures, and methods of program evaluation. Taken out of context none of these methods are more correct or more appropriate than the others. All are useful and complementary to an effective management process.

The appropriateness and value of each approach will depend upon both the management level involved and the purpose of the measurement. Senior level managers need information about the functioning of the organization as a whole and about environmental changes and reactions, to enable them to establish an effective strategic planning process and to implement the resultant plans. Their requirements for feedback and information are different than those of the manager who implements those plans through the development of tactics and who executes the necessary activities. Each management level will also have different measurement needs at different times. Consequently, the most useful measures will depend upon the need, the management level, and the situation.

The type of measurement and the need for feedback may differ but the feedback system, which provides the necessary measures, should be totally integrated and interdependent with other management systems and with management as a whole. For example, output measures, in isolation, are usually almost meaningless, they must be related to some standard or other reference. Objectives to meet certain targets or certain standards, be they time, quantity, quality or improved processes, must be derived from higher level objectives or strategic plans if they are to contribute to the achievement of organizational purpose in a meaningful way. In an integrated system each type of measure feeds into and supports other measures, which meet the needs of the various managers in the management hierarchy. Management objectives also perform an integrative role for those sections and departments which work together and rely on each other. Performance measurement does not achieve its potential if it is used merely to estimate the relationship between inputs and outputs. It needs to be regarded and used as an integral part of the management system of an organization. Measurement is a tool whereby managers at all levels in an organization can obtain feedback regarding the effectiveness and efficiency of their own operations and their relationships with other aspects of the organization. That feedback can then be used for management improvement.

A discussion of the relationship between performance

measurement and the process of management was introduced in Part II, in the form of a management framework. This framework will be used as a point of departure to discuss the role of the various measures outlined in this paper.

## PERFORMANCE MEASUREMENT AND EFFECTIVE MANAGEMENT

The relationship of performance measurement to effective management will be discussed relative to the various components of the management framework described in Part II.

### 1 Clear definition and understanding of purpose by the relevant managers.

Unless the purposes and functions of an organization, and each of its sub-elements, are clearly defined, a measurement of the effectiveness of that organization is not feasible. Without a clearly defined purpose and function, the role of the local government organization as a whole or of any part of that organization, cannot be established. If the role is not established the various responsibilities cannot be determined and allocated.

Basic as this requirement is to effective management, the LGMP experience has indicated that many individuals, if not most, at the elected and top administrative levels of government, have seldom, if ever, really thought about the functions which local government performs. Without that fundamental orientation, input and output measures are of little practical use, yet this is precisely the case when measurement is introduced to many local governments in their current state of sophistication.

Quite often, it seems that a complete reorientation of thinking is necessary. An example of such a reorientation occurred within a planning department with which the Project Team worked.<sup>1</sup> At initial contact this department was obviously not as effective as it might have been, the employees were unhappy, the department seemed to have no real impact on the municipality, it had no clear sense of direction, and the departmental orientation was reactive rather than proactive in respect to its basic planning function. After some thoughtful discussion these problems were recognized by the senior management. They agreed that the first priority was to define the purpose and role of the department – to establish its reason for existence. Once this was estab-

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1 Example goals and objectives from this department are included in Appendix 1 in the section on process oriented measures.

lished, the department could be re-organized and the work flows modified to ensure that the role was performed effectively.

Top managers in the department quickly agreed that the department could make a real contribution to the municipality and the roles they defined greatly expanded the influence of the department. These new roles provided a strong sense of direction and the necessary context for the changes that were needed if the department was to operate effectively in its expanded role. In this case, a change of perspective from a reactive to a proactive stance was needed before the role and purpose could be effectively defined.

Clearly, role and purpose definition is required as the first step in the management improvement process. Measurement of departmental inputs and outputs, if taken as the first step, will not, in cases such as the one mentioned, contribute to effective departmental management. Often, it seems that when managers recognize departmental inefficiency or ineffectiveness they search for an 'objective' system to measure the output of the department. In the planning example, objective measurements of a misdefined function would have contributed very little to management improvement. Attention would have been focused on those objective measures and the operators who work closely with the output. Corrections would merely have resulted in more efficient performance of the wrong role; the real problem lay with upper management not providing leadership or appropriate direction for managers within the department. Such problems will obviously not be identified by a process centred on output measurement. In a number of examples given in Appendix 1, the problems clearly lay with upper management. However, in many cases, the reaction was to precisely define and attempt to control the activities of people at the operational level. These activities become the focus of improvement, refinements are made and savings are achieved, without identifying the real cause of the ineffectiveness, and without the consequent re-assignment of responsibility to carry out the necessary functions.

Each manager needs to ensure that the purpose of his part of the organization, as well as the role of every person in contributing to that purpose, is clearly defined. Measures can then be established to provide information to these managers telling them how effectively the outputs (products or services) of their units are achieving that purpose, and how efficiently and effectively resources are being used in the process. With no clear direction or goals, measures have no references except other measures, and these may or may not be meaningful in the specific context under consideration.

## **2 The identification of first general and then of more specific activities.**

Once council and administrative departments are clear on their respective roles, purposes, and responsibilities, they need to define the activities which must be carried out to fulfill the necessary functions. These include the general areas toward which management efforts must be aimed, often called goals or key result areas, and specific targets or objectives in each of these areas. Once

specific targets are identified they can then be translated into programs of activities which represent the operations of the department. If these specific targets are sufficiently comprehensive and represent well considered priorities, the degree of progress toward those targets is an appropriate measure of effectiveness.

Once a manager is clear what he should be accomplishing, the development of measures is relatively easy. This is particularly true in the case of support functions where feedback from user departments is comparatively easy to obtain and will relate directly to the purpose of the support unit. Client feedback from the public, on the other hand, is somewhat more difficult and expensive to obtain; however, the amount of expensive and unused feedback information in most local government organizations is quite astonishing.

## **3 The development of appropriate structures and procedures.**

Stipulated procedures will usually result in savings in time and resources for any recurrent activity. The development of such procedures requires input from all the individuals who will be affected, e.g. both the supplier and the user of a support service. The actual process of interaction, e.g. the way in which a central purchasing function operates, will always differ to some extent from the procedure which has been established for that operation, but carefully considered procedures are still very important.

Formal structures and formal procedures are major determinants of the way in which an organization operates, even though informal interaction and processes (the way it actually happens) are somewhat different. Thus, the section dealing with process oriented measures is particularly applicable here, especially with regard to the operation of individual managers and the successful conduct of inter-departmental or inter-divisional activities.

Fiscal measures also have a key role in this aspect of management. They help to tie the internal accounting and financial processes and procedures into an effective management system. If an organization is to have an effective management system it is necessary that the accounting and finance processes provide the type of information that will encourage and support that system. Unfortunately, what often happens is that the finance department recognizes the need for more efficient and effective operations and takes the initiative in introducing a new budgeting system (or other financial management system). An effective budget system should serve the needs of both line managers and finance departments; it requires input from both if it is to be established appropriately. Thus, while finance departments are recognizing the importance of the systems approach and are encouraging program development, goal and objectives setting, etc., they are not able to bring about the necessary changes in an organization without contributions from managers from other departments.

The key measurement activity in the area of structures and procedures is one which helps to determine the most appropriate structures and procedures for the task



in hand. Structure, which is the organization of activities and interactions, really should emerge to facilitate processes, which are the ways in which managers communicate, co-ordinate and co-operate, in order that management interactions can take place as easily and economically as possible. In most organizations, however, structure is established according to function without any detailed consideration of the activities and interactions of the people involved. When desired results are not achieved, structure is often blamed without first undertaking an effective analysis of actual patterns of interaction and processes. As a consequence, changes in structure are made which are inappropriate and ineffective.

Informal structure, the actual pattern of interaction, often differs radically from formal structure. Where radical differences are apparent between formal and informal structure or where formal structure seems to hinder rather than facilitate interaction, new formal structures should be considered. A further LGMP publication *The LGMP Experience: Guidelines for Organizational Change in Local Government* discusses some procedures which might be used to re-establish structure or to improve support processes.

#### 4 The development of an ongoing management operation with internal monitoring and control procedures.

A subjective measure for each manager to consider is how closely his own definitions of the major priorities, targets and operational problems coincide with those of his subordinates. If there is a great deal of variation in areas for which subordinates have specific responsibility, then monitoring and control processes are not serving their functions. The role of clear goals and objectives in monitoring and control has been discussed in Part VI, of this paper. As long as goals and objectives have been fully and carefully defined, then an effective review process, again described in Part VI, can act as both a monitor and a control.

Output measures, and other measures of efficiency and effectiveness, have a useful role in control. They can help determine to what extent the objectives have been met and can indicate where improvement is needed. The role of these types of measures is limited, however. They can help to indicate the accomplishment of an objective but they cannot help to determine whether or not the objective itself is the correct one in the circumstances. This is an important aspect of performance measurement that is frequently overlooked.

Efficiency and effectiveness measures must be related to an objective or to a predetermined level of activity. In turn, an objective must itself be related to the goals and purpose of the organization. An example was given earlier of a measure of police performance which involved the miles driven. Obviously, police officers would tend to drive as many miles as possible in a shift if this were a criterion. This objective was not directly related to the purpose of the police force and indicates that the achievement of an objective does not necessarily mean that the organizational purpose is being fulfilled. This is why it is important to see performance

measurement as a part of the overall management process and not to simply measure products or results.

Every manager is responsible for certain outputs regardless of the nature of the task. The LGMP experience has indicated that such outputs can be clearly defined in conjunction with the next highest level of management and measured with the help of client feedback. Many managers are really performing an internal service or support role for other managers but this does not prevent the measurement of their effectiveness in that role, in fact it can make such measurement or feedback easier.

Whenever possible, managers at all levels of an organization should obtain feedback from clients, whether those clients are the public or other elected or administrative members of the local government organization. In almost all cases, client feedback is the most appropriate measure of effectiveness although it must be remembered that clients often have little appreciation of the alternative services which might be provided.

The important point is that as long as a manager has a clearly defined role with specific targets, the measurement of performance is relatively easy. On the other hand, if a manager is unable to explicitly define both role and targets his ability to manage effectively must be severely questioned because his performance can not be accurately measured.

Control of performance has seldom been defined to include the reward or reinforcement of adaptive and innovative behaviour. Yet certainly that is one of management's major responsibilities and one which is dependent upon the climate and reward system which is established. Local government, in particular, has been an inadequate performer in this area. Innovation is often discouraged by the system and rewards for effective performance are seldom apparent. Thus, managers should have objectives to innovate and explore alternatives. The existence of a search process is in itself an indication of good management, whether or not the search results in innovation in any given period.

If managers consistently set goals and objectives and rate the relative priorities of different objectives and programs under their control, they are essentially carrying out the major requirement of zero based budgeting, but the emphasis of their efforts is upon effective management rather than upon financial criteria.

#### 5 A periodic evaluative procedure to ensure that the organization's purpose and goals are being achieved.

The review process discussed in Part VI is a special type of monitoring device which can have a major impact upon organizational effectiveness.

The LGMP staff are convinced that not only should managers initiate team and individual reviews of objectives, processes and outputs, but that higher levels of management should also set aside a designated period in which to re-examine their own purposes, roles and the broad goals of the organization. The LGMP Team questions the ability of any council to effectively manage a municipality, if it does not take the time and the trouble to periodically sit down as a body and examine

its own role, and the role of individual councillors in that management process. By the same token, the corporate contribution of top administrators who never sit down together and discuss the broader issues in the community and the role of local government in providing a desirable quality of life, can also be questioned. These are the planning and monitoring functions of corporate management; they involve an evaluation of the past, a prognosis of the future and the formulation of some plans which will facilitate some control of the municipality's fate. It is these plans which ensure that the administrative objectives are up to date and that the measurement systems are meaningful.

Reward systems were discussed under #4 above. Unfortunately, there are few apparent rewards for the councillors in municipalities who plan and manage effectively. In fact, careful planning and establishing direction may reduce a councillor's political and personal power in a community. It is in this planning area that the Province can contribute incentives and guidance to the municipal process. Incentives can take the form of carefully considered responses to municipal initiatives in planning, at least, with the development of some type of reward system for municipalities which have introduced an effective planning and review process and which have clear goals and objectives at the corporate level. The formulation of future oriented goals and objectives by an essentially political body (council), which is better equipped to handle the resolution of current conflicts, is a difficult role. This aspect is further discussed in some detail in *The LGMP Experience: Phase II*. Councils require incentives to become involved in such a process and require administrative and probably some consultant help to carry it out successfully. Provincial advisors could play an important role in this area by supplying consistent advice over a long period of time.

#### 6 Both ongoing and periodic modification and re-establishment of goals and objectives.

Management reviews not only have the function of examining past performance but also should involve both ongoing and periodic re-establishment of goals and objectives. Objectives are essentially useless unless the appropriate managers use them as reference points for management, thus progress must be reviewed on an ongoing basis. Comprehensive periodic reviews also perform a function by allowing managers to re-evaluate the effectiveness of their own activities.

Tying performance measurement into the management process acknowledges the importance and valuable role that it can play in an organization. As has been seen, there are many different methods of measurement, which may or may not be appropriate.

### PERFORMANCE MEASUREMENT FROM THE LGMP PERSPECTIVE

The interdependence and integration of management and performance measurement was recognized by the

LGMP Team. In fact, one of the major strengths of the LGMP lay in its emphasis upon the total management process. Managers were aided in clearly establishing the purpose of their operation and the roles they needed to play to achieve that purpose. While formal measurement was not emphasized it was made clear that objectives had to be measurable and that each manager and each program should have definitive objectives. The participation of all people in the organization in identifying problem areas and in examining solutions received major emphasis.<sup>2</sup>

The LGMP Team found that it was sometimes difficult to inspire managers to develop and improve their management abilities. One of the problems was that municipal managers are only infrequently trained in management. Many managers in local government are technical specialists who have become managers through advancing in their field of technical expertise (such as accounting, engineering, planning, etc.). They are well qualified to evaluate the service-related performance of their employees on the basis of their special training, experience, and so on. They are, however, generally unfamiliar with delegation, administration and the evaluation and review of managerial performance, and often need help in this area. The LGMP emphasized the development of management systems, both at the organizational and the individual level, in the hope that this would help managers to develop their own systematic approaches to measurement and to management improvement.

During the LGMP experience it became apparent that many managers were operating effectively within narrow confines but that they had never taken the time or the trouble to define their roles and tasks in a broad sense and to gain a perspective on how they might contribute to the organization as a whole. Thus, competition for resources, overlaps of responsibility and ineffectively defined support services were common problems. A large proportion of the LGMP effort was devoted to encouraging managers to take broader perspectives.

Probably, no other organization has experienced problems in the area of definition of responsibilities and assumption of authority, to the same degree as those experienced by local government. Municipalities hide behind the constraints of the Municipal Act and point to examples of Provincial intervention in cases where they have attempted to take the initiative. Yet no municipalities in Canada, to our knowledge, have a clear and explicit set of corporate goals and broad objectives which would warrant, or even permit, a large degree of delegation of authority and assignment of responsibility by the Provincial government.

A further problem was that many managers seemed to be unable to specify either their organizational or managerial roles, or to set priorities and goals and objectives for the future. In some cases, before goals and objectives could be set, managers needed basic instruction in the concepts of management — delegation, supervision, etc. In other cases, rather than setting out by establishing goals and objectives, the Team found it to be more advantageous to hold meetings with managers to iden-

2 Specific accomplishments of the LGMP in areas related to measurement and some of the problems encountered in each of the Project Municipalities are outlined in Appendix 1.



tify specific problem areas. Objectives, with stated time and quantity targets, could then be set to overcome these problems.

Another difficulty in local government was the lack of interest (sometimes unspoken) in using measurement systems of any kind. Perhaps, partially as a result of insecurity, managers were reticent to measure performance in case that measurement was used as a tool against them. Associated with that insecurity was a tradition of reactive management, which seems to be almost universal in local government administration.

Externally imposed evaluative systems would have been of little help to most of these managers. It would have been futile to have superimposed an output, program oriented measurement system on a department that was not geared to think in terms of measurement, that was wary of any type of measurement system, and that was not secure about its role and responsibilities. There is little incentive for improvement in such a system and people will quickly find a way to fudge the data if necessary. Situations such as this convinced the Project Team of the importance of the development of better internal management systems if management in local government is to be improved.

It was assumed that performance measurement would be used to help individual managers to manage their activities rather than to provide a control function for top management. Management systems established solely for control purposes defy all the theories of human motivation. Effective managers are not helped by having somebody peer over their shoulders to check performance. They are helped by having the information that will assist them to understand and profit from the changes that they see happening around them. Effective managers seek to grow and develop and to find better ways to express themselves in their management capacities. 'Improved' management systems, that the manager did not help to create, that do not measure those aspects that he considers to be important, and that do not help him sort out and achieve his goals and objectives, are subject to abuse.

In a number of cases, the LGMP Team saw that the reaction to these systems was political maneuvering, game playing, the fudging of results or the proposed establishment of more complex systems to take the heat off. Rather than modifying the system to help them in a meaningful way, reactive managers would adjust their behaviour to pander to the system. Meaningful management improvement was limited in such circumstances.

Using performance measurement to control and monitor managers rather than to assist them in their operations is one critical problem that has consistently underscored efforts at management improvement. The LGMP Team found the whole area of management control and responsibility to be an important one and worthy of special discussion. If an organization does not trust its managers and give them sufficient scope and freedom to operate, the potential for effective management is certainly limited.

## MANAGEMENT RESPONSIBILITY AND CONTROL PROCESSES

Almost all organizations are concerned with the development of some type of control system which will ensure that the people in the organization are carrying out their designated tasks. The most effective way of ensuring that managers are performing their tasks economically and efficiently is through the acceptance of responsibility by each manager in the system. He needs to accept responsibility for ensuring that persons reporting to him have clearly defined roles and targets which they understand, preferably have helped to plan, and have a commitment to perform. Clear targets and roles make possible task-oriented discussions regarding input, processes and outputs between superiors and their subordinates (and peers if there is a fair degree of overlap in function, or if one provides a service for another). The most effective control process, therefore, is an integral part of any effective management system, since it is based upon the acceptance of responsibility for promoting effective and efficient operation by each manager in the organization.

In addition to this fundamental management-based control system, at least three distinct processes can also contribute to organization control. These are as follows.

**1 Financial audits and the ongoing financial information system** can provide management at all levels with some idea of the efficiency of the current operation and can provide data which compares that operation with past performance. Financial audits constitute a type of control for higher level management, but audits involving strictly financial analysis do not indicate whether or not the best process is being used or even if the most appropriate service is being supplied. Financial information systems should provide managers at all levels with feedback on the costs of their operations. Thus, they are an aid to managers in identifying trouble spots where the operation is not going according to plan. Financial information should be current, understandable and should present the manager with an overview of his operation which enables him to control his allocation of resources, and to monitor areas where problems seem to be developing. Carefully constructed budgets with clearly stated objectives and relevant costs will provide an excellent base for a financial information system.

**2 Management audits**, a concept which requires some discussion and definition, can help to identify the processes managers are actually using. An effective management audit is probably one of the most useful management control devices, but such audits have limitations which must be clearly recognized. Since the concept of management audits is relatively new and definitions abound, a review of the potential role of management audits and some of their limitations might be useful. A management audit includes:

- a an examination of the goals and objectives of an organization and its parts, to determine how well those goals and objectives are inter-related and to what extent they are being accomplished;



- b an identification and analysis of the processes of management to determine how efficient they are in terms of time and resources and where new procedures, methods and approaches might be more appropriate; and
- c the obtaining of evidence regarding management problems within the organization so that these can be fed back to managers at the appropriate level, or ensuring that there is an ongoing problem identification process which is already accomplishing this task.

Unfortunately, many organizations are trying to use management audits to determine the appropriateness of goals and objectives, a task which can really only be accomplished by the management of an organization, in consultation with the client or clients. On the other hand, the auditor can question the appropriateness of goals relative to the stated purpose of an organization and also question management as to whether there are sufficient clear goals and objectives to outline programs to the extent that their effectiveness can be evaluated. An auditor can also suggest that there is an urgent need for clearer role definition and more definitive responsibility for managers, so that their performance can be evaluated against some more concrete criteria. An auditor will encounter a major problem, however, if he attempts to redefine the goals and objectives of an organization or if he begins to suggest action alternatives without the proper dialogue with management.

**3 Financial audits, management audits and performance reviews** can combine to indicate how well managers within the system are performing, where additional resources are required, where changes in processes appear to be advisable and where training is needed.

By identifying how a manager is performing financially and operationally, the above process, plus the financial and management information systems, provide him with information which he can use to improve his own effectiveness and efficiency.

None of these monitoring and controlling processes will be particularly effective, however, unless managers accept individual responsibility for ongoing management improvement. Unfortunately, the acceptance of personal responsibility has often been discouraged because control processes have frequently been superimposed upon managers, rather than incorporated as an aid to fulfilling the managerial role. As has been noted, managers in such a position may attempt to satisfy a number of control requirements instead of concentrating upon the effective and efficient production of a specified service.

Where management processes such as the budget, performance appraisal, and the provision of management information have evolved in a control role rather than in a management assistance and development role, they have lost the potential to contribute to more efficient and effective management. If full use is to be made of such processes to increase management effectiveness, managers within the organization need to be involved in establishing them. Budget processes determined by a finance department are unlikely to meet the needs of

operating managers and may involve large expenditures of time with little purpose. In the same way, performance appraisal processes can only fulfill management development roles if managers feel that they are worthwhile. In both cases, the expert input of finance and personnel specialists, respectively, is necessary but the process must be established to meet the needs of managers and not of staff specialists.

Once processes have been established, managers will need assistance from staff specialists in learning how to best carry out the process. As higher level managers become familiar with a process they can help people reporting to them to use it effectively.

## PREREQUISITES FOR PERFORMANCE MEASUREMENT

If performance measurement is accepted as being part of an ongoing management improvement system it can be seen from the foregoing discussion that certain prerequisites must be established before meaningful performance measurement can take place. These are as follows.

- 1 The purpose, role and responsibility of the manager or management unit to be assessed must be known and understood before measurement criteria are established or put into operation. If these are not established, the objectives and target measures may not reflect what the manager should really be trying to do.
- 2 The necessary community co-ordination and co-operation channels should be open and clear. The measurement system should measure whether or not the necessary processes and procedures are working well.
- 3 Managers must express a real interest in learning and in improving their management activities. This means that they should develop a tolerance of failure and accept failure as a part of development and learn from it. Performance measurement is not just criticism, it is a learning process.
- 4 Performance measures must be developed by the managers who are responsible for completing the tasks. Feedback is the best way to gauge effectiveness, consequently measures can include suggestions from experts, from users of services or products, or from other members of staff. Even in the areas of service delivery, performance measures cannot be developed by consultants, advisors or even senior managers. However able those people are, they are only partially familiar with the task that is being done, they have little or no influence or control over how it is being done, and do not bear the direct responsibility for its successful accomplishment. Senior managers are, of course, indirectly responsible and will estimate how well the manager is performing relative to others and give him feedback on this.
- 5 The management system in operation should promote the use of measurement, and reward managers for developing appropriate measures. Effective

measurement will depend upon frank and honest input from peers, staff and superiors.

- 6 Top managers and top management teams must be willing to evaluate themselves and not just use efficiency and output measures to evaluate lower level managers.

## SUMMARY

Performance measurement is not the answer to all the problems of municipalities. Experience has shown, however, that when properly implemented, such systems can go a long way toward helping administrators identify their problems. Systems of goals, objectives and performance measures that have been implemented to date have greatly enhanced the administrator's ability to identify problems and to allocate funds in an optimal way. These are abilities that all city administrators need, in order to meet the increasing demands for services, while at the same time operating within tight fiscal constraints.

Certain trends in performance measurement in municipalities are easily discernable. First, there is the rapidly growing interest in this field. Hopefully this will mean that many more municipalities will implement performance measurement systems in the next few years. Second, the trend in performance measurement is towards sophistication and away from simple workload measures. Hopefully, this will mean more involvement by the public and by individual managers in the running of local government. The demand for more and better municipal services is becoming stronger in Canada, while the financial resource base for municipalities is not growing in a similar manner. Comprehensive performance measurement contributing to improved performance is one way to help meet these challenges. It seems, however, that Canadian municipalities are lagging behind those of the United States and the United Kingdom in this field, in both interest and implementation; this is something that they can ill-afford to do. Our conclusions regarding the potential contribution of per-

formance measurement are remarkably simple. Simple as they are, however, and inter-related as they are with basic management, we have yet to find an organization applying this systematic approach in a comprehensive way.

The authors of this paper are convinced that the fault does not lie with middle managers. They believe, as a result of their experiences with at least eight local government organizations during the course of the LGMP, that managers wish to do a good job and that personal awareness of a potential for management improvement is a most powerful incentive to change. Given the tools, most managers will evaluate their work and will try to improve their own effectiveness.

It is a senior management responsibility to ensure that these tools are available. The key for upper level managers is to ensure that the organizational purpose and role are clearly defined and communicated, and to encourage managers in the system to identify goals and objectives and to review them on a regular basis. Measures of input, measures of output and measures of the efficiency of processes can all contribute to the evaluation of overall management efficiency and effectiveness. Even the fact that such processes exist is, in itself, a major measure of management effectiveness.

Finally, this paper should add a new dimension to municipal performance measurement thinking in two respects.

- 1 It presents a broadened perspective of performance measurement that relates it directly to a framework of effective management.
- 2 It suggests the incorporation of a systematic approach which will allow managers at all levels of authority to evaluate and review the performance of their own activities, and which will give them some idea of what they personally can do to improve their own operations and the effectiveness of the organization.





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# Appendices



# Appendix I

## Examples of Current Performance Measurement Practice

This appendix provides examples of measures and applications of performance measurement. In the interest of clarity the main part of this paper has not been interrupted with lengthy examples of the various measures being discussed. To clarify and differentiate the concepts involved, however, it is important to have this back-up material. Examples are included of each of the types of measurement that were discussed in the main body of this paper. These examples are not proposed as being ideal; they have been chosen on the basis of the clarity with which they express the underlying concept.

Each municipality needs to develop measures which 'fit' the particular needs of its own managers. Consequently, these examples should not be considered to be models which can be successfully transferred into a different context. As we have tried to indicate, managers themselves must accept responsibility for developing measures that are meaningful to them and to other managers in the system who need such information.

Each of the different types of measurement will be discussed in turn.

- A Output Oriented Measures
- B Fiscally Oriented Measures
- C Program Oriented Measures
- D Management Process Oriented Measures

### A OUTPUT ORIENTED MEASURES

Output oriented measures can be broken down into:

- 1 throughput;
- 2 efficiency; and
- 3 effectiveness.

#### 1 Throughput

The following measures provided by the Urban Institute are good examples of throughput or workload measures which can be applied to various municipal services.

Service Function <sup>1</sup>	Illustrative 'Workload' Measure
a Solid Waste Collection	Tons of solid waste collected
b Liquid Waste Treatment (Sewage)	Gallons of sewage treated
c Law Enforcement (Police)	No. of surveillance-hours No. of calls No. of crimes investigated
d Law Enforcement (Courts)	No. of cases resolved
e Health and Hospital	No. of patient-days
f Recreation	Acres of recreational activities Attendance figures
g Street Maintenance	Square yards of repairs made
h Fire Control	Fire calls Number of inspections
i Primary and Secondary Education	Number of pupils

As an application of these measures, the following provides a good example of the development of a productivity index for refuse collection workers using very simple measures – manhours, route completion rate, quality of refuse collected, etc.

1 96.



Detroit Productivity Incentive Plan for Refuse Collection Workers: Computation of Productivity Index, March 12, 1973 to December 30, 1973, Computation Period.<sup>2</sup>

		Computation Periods		
		March 12, 1973 to June 30, 1973	July 1, 1973 to Sept. 30, 1973	October 1, 1973 to December 30, 1973
1	Paid man-hours per refuse ton collected			
a	Average for period	2.43	2.44	2.96
b	Average for same period of last year	3.06	3.14	3.49
c	Optimum for same period of last year	2.36	2.48	2.43
d	Index for period	+.45	+.50	4.25
2	Route completions			
a	Average daily percentage for period	67.4%	69%	83%
b	Formula standard percentage	90%	90%	90%
c	Index for period	-.20	-.20	-.14
3	Overtime hours			
a	Total number this period	77,120	105,470	43,668
b	Average of totals for same period of three previous years	87,100	132,700	81,700
c	Index for period	+.02	-.04	+.09
4	Quality factor — Index for period	.00	.00	.00
5	Combined productivity index for period	+.27	+.34	+.20

INCORPORATING INCENTIVES

In its efforts to improve productivity, the City of Orange, California, chose work measurement and work simplification tied to an incentive scheme.<sup>3</sup> This least complicated approach to measuring throughput was chosen because the measurement process was new to the city and there was a lack of technical management sophistication.

The process involved the identification and recording of activities within different functions. Each function was broken down into those aspects that were identifiable, controllable and measureable. Measures of output were then established for a base period so that improvement could be measured.

The following steps completed the productivity improvement process.

- a Determine objectives, to provide criteria for delineating outputs.
- b Develop list of true outputs for counting.
- c Determine ways of counting outputs.
- d Develop productivity standards (using a wide variety of work measurement techniques) for the outputs.
- e Determine base period (bench-mark) productivity.
- f Develop and implement an on-going productivity measurement and reporting system.
- g Motivate managers to improve productivity by changing such factors as:
  - i output-mix;
  - ii manpower allocation;
  - iii work planning;
  - iv the detailed methods of producing outputs; and
  - v introduction of quantification of planned outputs, productivity standards, and forecasts of productivity into the budget.

<sup>2</sup> 93.

<sup>3</sup> See Performance Measurement Programs, City of Orange, California, Appendix II.

Thus, this approach concentrated on changing work patterns to effect measureable changes in outputs. The organization for the program included the establishment of a part-time productivity team to conduct work simplification studies on a city-wide basis.

The program was extended to include an incentive plan in which salaries were related to output measures. In this case Police Department salaries were tied to decreases in the crime rate. Reductions in the crime rate for rape, all burglaries and auto theft were directly related to increases in pay. For instance, if the rate for the above crimes fell by 3% over a set period, then salaries would be increased by 1%. The output measure in this case was the number of radio call slips which resulted in reported offenses.

After two years of operation this incentive plan was dropped. In explaining why the scheme was not pursued, J.J. Carmichael, Administrative Analyst for Management Sciences for the city, made the following observations in a letter to the Project Team.

All of the reasons for its demise are not clear; however, here are my own opinions:

- a It is difficult to establish the degree of influence that police actions have on the prevention of crime or to ascertain the weights attributable to other factors; i.e., economic climate, urbanization, poverty, alienation.
- b The incentive was 'one way' in action. It did not provide for pay reductions if crime rates increased at a later date.
- c The incentive was locked into permanent pay increases which tended to push salary structures out of line. Personally, I think one-shot bonuses would have obviated this problem.
- d There may be undesirable 'spill-over' effects of crime increases in adjacent jurisdictions.
- e Other crime classes may be adversely affected by concentration on a certain group of crimes.

If some of these objections could be overcome, there is reason to believe that a modified version of this incentive scheme could be successful in small or medium-sized cities.

2 Efficiency

Efficiency measures are those related to unit costs, work standards and utilization of resources. They are an extension of throughput measures in that they often involve a manipulation of throughput measures to obtain comparisons, etc. Some examples of efficiency oriented programs include those of the following.

KANSAS CITY, MISSOURI

In response to the recommendations of the National Commission on Productivity, Kansas City, Missouri, has launched a productivity program based on efficiency measures with the help of a full-time industrial engineer hired for that purpose. The program is 'based upon the use of industrial engineering techniques to establish work standards, improve scheduling and work flow, evaluate the need for and benefits that can

be derived from new equipment, develop new methods and techniques and generally call to the attention of city forces the need to increase productivity.'<sup>4</sup> This program has been successfully implemented in several departments where it has been based on throughput measures. Counselling and participative management were incorporated and the emphasis was placed, not so much on individual measurement as on team planning and performance.

WILMINGTON, DELAWARE

In company with so many other municipalities in the early 1970's Wilmington, Delaware, felt the need for service delivery productivity improvement and cost reductions. Efficiency measures helped the city to do this in a number of areas, including garbage collection.<sup>5</sup>

Wilmington, a municipality on the U.S. Eastern Seaboard has a population of 80,000 but it is also the urban centre for over 300,000 residents in the surrounding area. The city has 36 household collection routes in its garbage pick-up operation. Twice a week, eighteen collection crews, each composed of five men, would pick up garbage on these routes from the backyards, alleys and curbs. These crews worked four days a week. As an efficiency incentive the crews worked on a task basis – the men could go home once their route was completed and the truck emptied. Regardless of the number of hours they actually worked to complete their routes the men were paid as if they had worked ten hours in a day or forty hours per week.

During union negotiations the management undertook a study of the garbage collection activities on an efficiency basis. A review of the daily time sheets showed that the average garbage collection crew worked a total of 23.42 hours per week. Since each man was paid for 40 hours the effective hourly rate was considered excessive.

A further in-depth efficiency study revealed the following statistics.

Wilmington Performance Measures

Average collection time per stop	0.64 minutes
Average manpower minutes per ton	121.8 minutes
Average pounds per stop	52.8 pounds
Cost per stop	\$0.824/stop
Cost per ton	\$31.19/ton
Stops per crew per day	546.1 stops/crew/day
Lunch break	30 minutes
Landfill Haul Time	40 minutes/trip

Comparing these figures with the results of a comprehensive survey of U.S. city costs, Wilmington found that its costs were over 75% higher than the national average, whereas the work week was significantly less than average. The city subsequently decided that crew sizes should be reduced by 45%, i.e. from five to three

4 See Performance Measurement Programs, Kansas City, Missouri, Appendix II.  
5 See Performance Measurement Programs, Wilmington, Delaware, Appendix II.

operators. No employees were to be laid-off and pay levels would be adjusted to compensate for the extra work load. It was determined that the three man crew would still be able to complete their assigned routes in less than 40 hours. These actions brought union backlash but the decisions held.

After two years in operation it was found that the work week was only increased by approximately three hours to an average of 26.51 hours per week. It was also found that annual salaries in the division increased 22% over

the two years while the divisional budget decreased by over 23%. In this case, efficiency measures had helped to identify problem areas and to indicate places where savings were possible.

One important approach to efficiency involves work standards. These can be a useful measurement tool for planning and scheduling output. An example of precise output measurement and standard determination is given in the following planned work schedule for a parks maintenance groundskeeper.

Work Schedule for Parks Maintenance Groundskeeper<sup>6</sup>

Time	Work task	Measured Work Hours	Standard Hours
8:00 A.M.	Check-in, get equipment	.08	.08
8:05	Travel to park site	.25	.25
8:20	Unload equipment	.08	.03
8:25	Police 6 acres grass areas	1.08	1.05
9:30	Rest break	.25	—
9:45	Mow 4 acres grass areas	2.25	2.08
12:00 P.M.	Lunch	—	—
12:30	Mow 2 acres grass areas	1.00	1.04
1:30	Clean 2 restrooms	.75	.68
2:15	Rest break	.25	—
2:30	Grade and line baseball diamond	1.58	1.60
4:05	Load equipment	.08	.03
4:10	Travel to district office	.25	.25
4:25	Unload equipment, check-out	.08	.08
4:30	Off duty	.08	.08
		8.00	7.17
Total Hours <sup>7</sup>			
Utilization: 89.6%			

LITTLE ROCK, ARKANSAS

A further example of the use of standards in efficiency measures is provided by the Little Rock, Arkansas, custodial services study.<sup>8</sup> The city found that its municipal buildings were not kept clean even though a large number of custodial staff were employed. An attempt was made to determine whether the city should continue to provide custodial services with its own staff or whether it should contract for these services. The study took the route of determining and comparing work time standards. Once established it was felt that these could be compared with expected results and with the results offered by local custodial service firms.

The first aim of the study, therefore, was to find a comparison between effort expended and results obtained. Two techniques were employed to accomplish this.

- a A ration delay study. Ration delay is the observation and recording of those custodians working, not working, and away from their work area, at pre-established, randomly determined times throughout the day. The purpose of these measures was to assess personnel utilization. They gave measures of how much time was being lost and where it was being lost.
- b Engineered time standards. Time standards provided a frame of reference for comparing the tasks that were actually performed. The output of the custodial staff was compared with the output that could reasonably be expected from an average employee, working with average skill and effort, under normal working conditions.

6 94.

7 Figures rounded.

8 See Performance Measurement Programs, Little Rock, Arkansas, Appendix II.



The standards were determined by cataloguing the areas to be cleaned and the work activities necessary to obtain a pre-determined level of service. An example may be 'dust mopping floors with between two and six items of furniture per 100 square feet. The time standard is 0.0124 hours per 100 square feet. The equipment or material standard would be a treated dust mop.'

Standard operating methods were determined, the standards developed and work loads calculated. The following is an example of such a work load calculation.

Workload Calculation

A Task:	Office Space Damp Mop and Buff 57,564 ft. <sup>2</sup>
B Standard Reference:	UAD Jan 05.03
C Standard Measure:	.0390/100 ft. <sup>2</sup>
D Time Requirement:	(Ax C) 22.45 hours
E Frequency:	Weekly (52 times/year)
F Annual Requirement:	1167.4 hours (22.45 x 52)
G P.F. & D.* of 15%	175.1 hours (15% x F)
H Total Annual Requirement:	1342.5 hours (F+ G)

\* personal time, fatigue and normal delays

These analyses showed that the custodial staff were working at well below what was calculated to be a reasonable average. The 'effect' side involved dividing the number of hours worked into the total salary and fringe benefit cost. This gave a cost per hour of effort. The 'results' side involved dividing the number of productive hours into the total cost. This gave a cost per hour of results. The difference between 'effort' and 'results' gave an indication of unproductive cost.

When the total annual work load costs were determined, bids were solicited for custodial maintenance service. It was found that the lower bids from the local contractors were considerably below the present cost and even below the cost which would be incurred if the performance were improved to near standard.

The city decided that 'on the face of it, there was but one logical choice; contract for custodial services.'

The following are examples of the work unit breakdowns and pre-determined engineering standards. As can be seen, the standards are very precise examples of work unit breakdown specifications.

Examples of Work Unit Breakdowns

Frequency code:

Frequency	Legend
A 5XW	Daily - 5 Days Per Week
B 1xW	Weekly
C 1xYR	Yearly
D 3xYR	Three Times Yearly

Services proposed

- A General Offices Cleaning (Tile Floor), trash and utility, square footage 44,956. Frequency 5xW, except where noted.
  - 1 Furniture and Files:
    - a Dust with chemically treated dust cloths.
    - b Cleaned as per manufacturer's instructions.
  - 2 Ash Trays:
    - a Empty and wipe clean of all residue.
  - 3 Wastebaskets:
    - a Empty and wipe clear. Remove contents to designated areas.
    - b Wash and/or polish — Every 2 months.
  - 4 Walls:
    - a Spot clean — Weekly.
    - b Dust or vacuum — Every 2 months.
  - 5 Doors:
    - a Dust — Weekly.
  - 6 Pictures and Display Cases:
    - a Cleaned — Monthly.
  - 7 Floors:
    - a Resilient tile and concrete. Dust mop with chemically treated dust mops.
  - 8 Glass:
    - a Partition glass:
      - i Spot cleaned.
      - ii Cleaned both sides — Monthly.
- B General Offices Cleaning (Carpet Floor). Frequency 5xW, Square footage 6,117.
  - 1 Furniture and Files:
    - a Dust with chemically treated dust cloths.
    - b Cleaned as per manufacturer's instructions.
  - 2 Ash Trays:
    - a Empty and wipe clean of all residue.
  - 3 Wastebaskets:
    - a Empty and wipe clean. Remove contents to designated areas.
    - b Wash and/or polish — Every 2 months.
  - 4 Walls:
    - a Spot clean — Weekly.
    - b Dust or vacuum — Every 2 months.
  - 5 Doors:
    - a Dust — Weekly.
  - 6 Pictures and Display cases:
    - a Cleaned — Monthly.
  - 7 Carpets:
    - a Vacuum and spot clean.
  - 8 Glass:
    - a partition glass:
      - i spot cleaned
      - ii cleaned both sides — Monthly.

### Examples of Work Standards

Operation	Variable or Type	Range	.0001 Hours
Damp Mopping	Light soil-(1) item of furniture per 100 sq. ft.	100 sq. ft.	.0267
	Heavy soil-(1) item of furniture per 100 sq. ft.	100 sq. ft.	.0441
	Light soil-(2-6) items of furniture per 100 sq. ft.	100 sq. ft.	.0390
	Heavy soil (2-6) items of furniture per 100 sq. ft.	100 sq. ft.	.0511
	Heavy or light soil-(7 or more) items of furniture per 100 sq. ft.	100 sq. ft.	.0484
	Stairs-(4) steps - 5 ft. long	4 steps	.0191
Machine Scrubbing	Landings-up to 100 sq. ft.	Each	.0330
	All soil conditions (1) item of furniture per 100 sq. ft.	100 sq. ft.	.0402
	Light soil-(1) item of furniture per 100 sq. ft.	100 sq. ft.	.0467
Wet Mopping	Heavy soil-(1) item of furniture per 100 sq. ft.	100 sq. ft.	.0611
	Light soil-(2-6) items of furniture per 100 sq. ft.	100 sq. ft.	.0660
	Heavy soil-(2-6) items of furniture per 100 sq. ft.	100 sq. ft.	.0781
	Heavy or light soil-(7 or more) items of furniture per 100 sq. ft.	100 sq. ft.	.0754
	Stairs-(4) steps - 5 ft. long	4 steps	.0358
	Landings-up to 100 sq. ft.	Each	.0523
Strip and Wax	Floor-(1-6) items of furniture per 100 sq. ft.	100 sq. ft.	.1132
	Floor-(7 or more) items of furniture	100 sq. ft.	.1276

### 3 Effectiveness

Effectiveness measures have been broken down into expert judgement, user response and goal and objective achievement. Each will be illustrated separately.

#### a EXPERT JUDGEMENT

An example of the use of expert judgement in performance measurement is found in the City of Fort Worth's productivity improvement projects.

Fort Worth uses a street cleanliness rating system keyed to the use of a supervisor in the street cleaning program. The Assistant Public Works Director outlines the system as follows.<sup>9</sup>

The supervisor rates the cleanliness of a swept street as satisfactory, poor, or unsatisfactory. In the event a poor or unsatisfactory rating is achieved, the sweeper operator is required to resweep the street and a significant number of these ratings are translated into the employee's evaluation report. We have centralized the street cleaning efforts under one supervisor and radio equipped our sweeper fleet and front-end loading trucks to achieve a higher level of productivity and positive supervisory control of the cleaning operation. The program is currently viewing modification in its second year with a study underway for a task incentive system and equipment modifications to permit more efficient mechanical cleaning of the street surface.

Our current cleaning operations include five nightly cleanings of the central business district and adjacent area each week, the weekly cleaning of all underpasses and major thoroughfares, and the monthly cleaning of arterial and collector streets with residential cleaning on an as-needed basis. Since the innovation of our cleanliness rating program we have been able to reduce our staffing by three street sweeper operators and have been able to maintain the same level of service. This has resulted in a savings in personnel and equipment operating costs in excess of \$50,000 per year.

#### b USER RESPONSE

User response is also a useful gauge of how well a job is done. Quite often this measure is achieved through formal surveys of clients or citizens benefitting from the municipal services. The following is an illustration of a citizen survey for the evaluation of an intensive street cleaning campaign.<sup>10</sup>

9 See Performance Measurement Programs, Fort Worth, Texas, Appendix II.  
10 83.

1 What do you think of the cleanliness of \_\_\_\_\_

\_\_\_\_\_ Street? Do you think the street is:

\_\_\_\_\_ Clean

\_\_\_\_\_ Mostly clean, but dirty in a few places

\_\_\_\_\_ Fairly dirty

\_\_\_\_\_ Very dirty

( \_\_\_\_\_ Don't know  
or no opinion)

2 What do you think of the cleanliness of the alleys in your neighbourhood? Do you think the alleys are:

\_\_\_\_\_ Clean

\_\_\_\_\_ Mostly clean, but dirty in a few places

\_\_\_\_\_ Fairly dirty

\_\_\_\_\_ Very dirty

( \_\_\_\_\_ Don't know  
or no opinion)

3 What do you think of the overall cleanliness of your neighbourhood?

\_\_\_\_\_ Clean

\_\_\_\_\_ Mostly clean, but dirty in a few places

\_\_\_\_\_ Fairly dirty

\_\_\_\_\_ Very dirty

( \_\_\_\_\_ Don't know  
or no opinion)

4 Have you noticed any change in the cleanliness of streets and alleys in your neighbourhood in the last 3 or 4 months? (If response is 'No', go to #6 or #8):

\_\_\_\_\_ Yes

\_\_\_\_\_ No

( \_\_\_\_\_ Don't know  
or no opinion)

5 Are the streets and alleys now:

\_\_\_\_\_ Somewhat cleaner

\_\_\_\_\_ Somewhat dirtier

\_\_\_\_\_ Very much cleaner

\_\_\_\_\_ Very much dirtier

(Ask #6 and #7 if a special cleaning or collection operation is being evaluated. Otherwise go to #8.)

6 Do you know what Operation (insert name of special operation) is? \_\_\_\_\_

\_\_\_\_\_ Yes

\_\_\_\_\_ No

( \_\_\_\_\_ Not sure)

7 Do you think Operation \_\_\_\_\_  
made a lasting effect on the cleanliness of streets and alleys:

\_\_\_\_\_ Yes

\_\_\_\_\_ No

8 Does the city of \_\_\_\_\_ collect your trash and garbage?

\_\_\_\_\_ Yes

( \_\_\_\_\_ Don't know. If no, or don't  
know, terminate unless private  
contractors are being evaluated.)



9 How often do the collectors miss picking up trash and garbage on schedule? Do they:

\_\_\_\_\_ Hardly ever miss (or never except  
for holidays and bad weather)

\_\_\_\_\_ Miss about once a month

\_\_\_\_\_ Miss more than once a month

(\_\_\_\_\_ Don't know

or no opinion)

10 How often do the collectors spill trash and garbage or leave some that you have set out? Do they spill or leave some:

\_\_\_\_\_ Hardly ever (or never)

\_\_\_\_\_ About once a month

\_\_\_\_\_ More than once a month

(\_\_\_\_\_ Don't know

or no opinion)

11 How often do the collectors make so much noise that it bothers you?

\_\_\_\_\_ Hardly ever (or never)

\_\_\_\_\_ About once a month

\_\_\_\_\_ More than once a month

(\_\_\_\_\_ Don't know

or no opinion)

12 How often do you notice widespread odors from uncollected garbage?

\_\_\_\_\_ Hardly ever (or never)

\_\_\_\_\_ Occasionally during hot weather

(\_\_\_\_\_ Frequently)

(\_\_\_\_\_ Don't know

or no opinion)

13 Have you been dissatisfied with your trash collection service at any time and for any reason in the last twelve months?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

(If Yes, write in reason they gave: \_\_\_\_\_)

14 Have you complained to the city government about the cleanliness of streets and alleys or refuse collection services in the last twelve months?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

15 How many times? \_\_\_\_\_

16 Were the conditions about which you complained corrected?

\_\_\_\_\_ Always

\_\_\_\_\_ Usually

\_\_\_\_\_ Seldom, if ever

#### c COMBINING EXPERT JUDGEMENT AND USER RESPONSE

The following represents the type of information that can be obtained through the use of both expert judgement and user responses for a local transportation service.<sup>11</sup>

##### Accessibility and Convenience

Percent of residents not within 'x' minutes of public transit service or more than one hour from key destinations.

11 85.

12 87.

##### Citizen perception of travel convenience.

###### Travel Time

Time required to travel between major origin and destination points.

Congestion duration and severity of delay.

###### Comfort

Index of road surface quality (bumpiness, etc.).

Citizen perception of travel comfort.

Examples of indicators of effectiveness for waste collection and recreation services that combine expert judgement, user response and available records, are as follows.<sup>12</sup>

Key Result Area	Quality Characteristic	Specific Measure	Data Collection Procedure
WASTE COLLECTION			
Health and Safety	Health Hazards	1 Percentage of blocks with/without one or more health hazards.	Systematic visual inspection of a representative sample of city streets.
	Fire Hazards	2 Percentage of blocks with/without one or more fire hazards.	Same as above
	Fires Involving Uncollected Waste	3 Number of fires involving uncollected solid waste.	Fire Department records.
	Rodent Hazard	4 Percentage of households reporting having seen/not seen one or more rats on their block.	Citizen survey of a representative set of city households.
	Rodent Bites	5 Number of rodent bites reported per 1,000 individuals.	City-county health records along with the latest planning department population estimates.
	Injuries to Solid Waste Collectors	6 Number of man-days lost due to injuries per 1,000 days paid.	Sanitation Department record.
Pleasing Aesthetics	Street and Neighbourhood Cleanliness	7 Percentage of blocks whose appearance is rated unsatisfactory/satisfactory on visual rating scale.	Systematic visual inspection of a representative sample of city streets using a photographic rating guide.
		8 Average block cleanliness rating.	Systematic visual inspection of a representative sample of city streets using a photographic rating guide.
	Offensive Odors	9 Percentage of households reporting/not reporting offensive odors.	Citizen survey of a representative set of city households.
	Objectionable Noise Incidents	10 Percentage of households reporting/not reporting objectionable noise during solid waste collection periods.	Citizen survey of a representative set of city households.
	Unsightly Appearance	11 Percentage of blocks with/without abandoned automobiles.	Systematic visual inspection of a representative sample of city streets.
Minimum Citizen Inconvenience	Missed Collections	12 Percentage of collection routes completed/not completed on schedule.	Sanitation Department records.
		13 Percentage of households reporting/not reporting missed collections.	Citizen survey of a representative set of city households.
	Spillage of Trash and Garbage During Collections	14 Percentage of households reporting/not reporting spillage by collection crews.	Same as above.

Key Result Area	Quality Characteristic	Specific Measure	Data Collection Procedure (cont'd)
Minimum Citizen Inconvenience cont'd	Damage to Private Property by Collection Crews	15 Percentage of households reporting/not reporting damage to personal property by collection crews.	Same as above.
General Satisfaction	Overall Citizen Neighbourhood Cleanliness Rating	16 Percentage of households rating overall neighbourhood cleanliness as satisfactory/unsatisfactory.	Citizen survey of a representative set of city households.
RECREATION			
Enjoyable-ness	Citizen Satisfaction	1 Percentage of households rating neighbourhood park and recreational opportunities as satisfactory/unsatisfactory.	Citizen survey of a representative set of households.
	User Satisfaction	2 Percentage of those households using city park recreation facilities who rate them as satisfactory/unsatisfactory.	Citizen survey of representative set of households.
	Usage—Household Participation	3 Percentage of households using/not using a city park or recreation facility one or more times over the past three months. (For non-users, also suggested is the measure: the percentage who do not use for each of a number of reasons, with those that are at least partly controllable by the city distinguished from those that are not.)	Citizen survey of a representative set of households.
	Usage—Individual Participation	4 Percentage of individuals, by age group, using a city park or recreation facility one or more times over the past three months.	
	Usage—Attendance	5 Number of visits at manned recreation sites.	Statistics kept by most agencies.
	Helpfulness—Attitude of Staff	6 Percentage of user households rating helpfulness-attitude of staff as satisfactory/unsatisfactory.	Citizen survey of a representative set of households.
	Crowdedness	7 Percentage of user households rating crowdedness of city facilities as satisfactory/unsatisfactory.	Same as above.
		8 Percentage of non-user households which give crowdedness as a reason for non-use of facilities.	Same as above.



Key Result Area	Quality Characteristic	Specific Measure	Data Collection Procedure	(cont'd)
Physical Attractiveness	User Satisfaction	9 Percentage of user households rating physical attractiveness as satisfactory/unsatisfactory.	Same as above.	
	Non-user Satisfaction	10 Percentage of non-user households which give lack of physical attractiveness as reason for non-use.	Same as above.	
	Facility Satisfaction	11 Percentage of user households rating cleanliness as satisfactory/unsatisfactory.	Same as above.	
	Equipment Condition	12 Percentage of user households rating condition of equipment as satisfactory/unsatisfactory.	Same as above.	
Safety	Injuries to Participants Resulting from Accidents	13 Number of serious injuries (e.g. those requiring hospitalization) per 10,000 participants.	Accident and attendance statistics kept by most recreation agencies.	
	Criminal Incidents	14 Number of criminal incidents per 10,000 attendees.	Criminal incident statistics kept by some park and recreation agencies and most municipal police forces. Attendance statistics kept by most recreation agencies.	
	User Satisfaction	15 Percentage of user households rating safety of facilities as satisfactory/unsatisfactory.	Citizen survey of representative set of households.	
	Non-user Satisfaction	16 Percentage of non-user households which give poor safety as a reason for non-use of municipal facilities.	Same as above.	
Accessibility	Physical Accessibility	17 Percentage of citizens who live within/not within, 15/30 minutes travel time of a city park or recreation facility. (Distinguished by type of facility and the primary transportation mode relevant for the facility type.)	Counts from mapping of latest census tract population figures against location of facilities with appropriate travel time radius drawn around each facility.	
		18 Percentage of non-user households which give poor physical accessibility as a reason for non-use.	Citizen survey of a representative set of households.	
	Hours of Operation	19 Percentage of user households rating hours of operation as satisfactory/unsatisfactory.	Same as above.	
		20 Percentage of non-user households which give poor operating hours as a reason for non-use.	Same as above.	

Key Result Area	Quality Characteristic	Specific Measure	Data Collection Procedure	(cont'd)
Variety	Program Variety	21 Average number of different program activities per facility.	Recreation agency records.	
	User Satisfaction	22 Percentage of user households rating the variety of program activities as satisfactory/unsatisfactory.	Citizen survey of a representative set of households.	
	Non-user Satisfaction	23 Percentage of non-user households which give poor program variety as a reason for non-use.	Same as above.	

These effectiveness measures can, of course, be tied to efficiency measures. The relationship between them can be seen in the following example from Palo Alto, California.<sup>13</sup> Palo Alto is implementing what is considered to be one of the most advanced applied performance measurement systems in North America.

The goal is to provide an on-going, in-house, effectiveness productivity measurement and analysis system which can provide a score card of the performance of public services, as they relate to the citizens.

#### Examples of Measures of Effectiveness and Efficiency – Palo Alto, California

Service	Effectiveness	Efficiency
Recreation	1—% of households which feel recreation opportunities are very good.	1 Cost per citizen served.
	2—Number of serious accidents per 100,000	2 Number of class hours provided per man-year.
	3—Total attendance at facilities and programs.	
	4—Average number of different programs per facility.	
Library	1—Citizen rating of hours of operation.	1 Number of books circulated per \$1000.
	2—Total circulation.	2 Cost per reference handled.
	3—Number of different books by type.	
	4—% of citizens who rate the library very good.	
Solid Waste and Street Cleaning	1—% of citizens who are satisfied with service.	1 Tons collected per \$1000.
	2—Rate of injuries to waste collectors.	2 Cost per unit served.
	3—Cleanliness rating for streets.	3 Tons collected per crew.
	4—Number of objectionable noise incidents.	

<sup>13</sup> See Performance Measurement Programs, Palo Alto, California, Appendix II.

Service	Effectiveness	Efficiency
Transportation	1—Citizen perception of travel convenience. 2—Rate of transportation related deaths, injuries and incidents of property damage. 3—Road surface quality. 4—% of residents not within “X” distance of public transit service.	1 Cost per trip. 2 Pot holes repaired per \$1000.
Water	1—Number of coliforms per litre. 2-% of citizens who rate the city supplied water acceptable on appearance, odor and taste. 3—Number of valid complaints about water pressure not shown to be due to causes outside city responsibility. 4—Time required from request for service to completion of hook up.	1 Cost per gallon. 2 Water mains repaired per crew-day.
Waste Water Treatment	1—BOD. 2—% of sewage not being treated.	1 Cost per 1,000,000 gallons treated. 2 Cost per pound BOD.
Storm Drain System	1—Dollar value of damage due to flooding per \$100,000 of market value per year. 2—Number of hours per year of road impassibility at key intersections due to flooding.	1 Cost per catch basin rebuilt. 2 Miles of sewer maintained per \$1000.
Police	1—Reported crime rates. 2—% of people afraid to walk in their neighbourhood at night. 3—% of reported crimes cleared by arrest. 4—% of arrests not surviving preliminary court hearing. 5—Overall % of valuables stolen that is subsequently recovered less damages. 6—Average response time.	1 Population served per \$1000 of police expenditure. 2 Number of cases investigated per detective.



d THE ACHIEVEMENT OF GOALS AND OBJECTIVES

The achievement of goals and objectives is also a measure of effectiveness. An example of this approach is given by the District of Burnaby, B.C. In 1976, Burnaby worked towards the establishment of a goal and objective system in its efforts to measure performance and to promote good management by the union exempt staff.<sup>14</sup>

The system which was established, basically focussed on the relationship between a superior and subordinate. At the initial meeting the two discussed what is involved in the subordinate's job, including a specification of the purpose for the position and an identification of the responsibilities associated with the job. When these have been established the subordinate has a clear idea of what he is accountable for and what end results are expected. This will give him an indication of measurement criteria and goal or attainment areas.

Both sides then agree on specific measures or yardsticks of accomplishment in the attainment area. These measures may be throughput, efficiency or other effectiveness measures. At this time levels of measurement are also set, e.g. what would be considered competent or marginal. Once these factors have been established goals can be set to be accomplished within the next time period.<sup>15</sup>

The purpose of this meeting, or series of meetings, is to assure that each side is clear on the subordinate's role and responsibility and on what is expected of the subordinate over the next period, usually one year.

Periodically, usually on an annual basis, superior and subordinate meet again to discuss progress. The meetings are set to discuss:

- 1 how well the goals set earlier were met and what 'rating' could be ascribed to the performance against each goal;

- 2 what areas of performance, other than those for which specific goals were set, deserve to be rated and what rating should be ascribed to them; and
- 3 what realistic goals are attainable within the next 12 months.

In all of these meetings the emphasis is on open discussion, communication and participation on both sides.

USING THROUGHPUT, EFFICIENCY AND EFFECTIVENESS MEASURES WITH GOALS AND OBJECTIVES

As noted in the Burnaby example, throughput and efficiency measures are often needed to determine the extent to which goals and objectives are achieved. The following examples provided by the City of Fort Worth<sup>16</sup> are good indicators of the relationship between goals, objectives and the other types of output measures. Departments from which these examples are drawn include police, financial administration, purchasing and stores, and data processing.

Police Department

Goal

To maintain a sufficient number of properly recruited, thoroughly screened, and completely qualified applicants immediately available to fill any vacancy occurring in the Fort Worth Police Department thereby insuring that the citizens of Fort Worth are provided with a properly staffed police department.

1974-75 Objectives

To provide qualified applicants to fill vacancies occurring in the Police Department.

To increase the 'population base' for selecting qualified police applicants.

To improve the quality of background investigations on applicants for sworn and civilian positions in the Police Department.

To increase the ethnic minority ratio of sworn officers in the department.

Measures of Efficiency and/or Effectiveness:	Actual 1972-73	Estimate 1973-74	Target 1974-75
Number of police and cadet applicants interviewed and processed.	284	668	750
Number of background investigations completed	106	127	146
Number of background investigations accepted by Review Board.	75	72	90
Number of background investigations completed free from any unresolved investigative leads.	N.A.	100	140
Number of ethnic minority persons employed as sworn officers	32	47	82

14 See Performance Measurement Programs, Burnaby, B.C., Appendix 11.

15 The use of goals as definitive targets differs from the LGMP usage of the term. These would be objectives in LGMP terminology.

16 See Performance Measurement Programs, Fort Worth, Texas, Appendix 11.

## Goal

To eliminate crimes perpetrated by juveniles in the City of Fort Worth and to insure that all juveniles who commit crimes are extended an opportunity to redirect their behaviour toward normal social activity.

### 1974-75 Objectives

To increase the clearance rate on juvenile offenses.

To reduce the rate of juveniles who are handled more than one time.

To increase contacts between juvenile offenders and officers under non-adverse conditions.

Measures of Efficiency and/or Effectiveness	Actual 1972-73	Estimate 1973-74	Target 1974-75
Juvenile offenses reported	7,154	7,418	6,677
Offenses cleared	4,571	4,821	4,673
Percent of recidivism	11.3%	10.17%	9.15%
Percent of juveniles reached with follow-up contacts	N/A	13%	14.3%
Average case clearance rate/officer	N/A	11%	12.1%
Referral to social agencies	N/A	5.25%	5.79%
Establishment checks	N/A	720	800

## Financial Administration Department

### Goal

Provision of all effective financial information to the City Council and City Manager on a timely basis and all necessary assistance to reporting managers in achievement of their approved goals and objectives, and the profitable, safe investment of all idle City funds.

### 1974-75 Objectives

Positive response to all requests for information from the City Council and City Manager within specified time limits.

Reduction of non-invested funds.

Achievement of the objectives of managers reporting to this activity.

Measures of Efficiency and/or Effectiveness	Actual 1972-73	Estimate 1973-74	Target 1974-75
Percentage of requests for information completed within allotted time	75.0%	80.00%	100.00%
Ratio of non-invested funds to total funds available	2.5%	2.25%	2.00%
Ratio of number of objectives achieved by managers to total number of objectives	N/A	N/A	N/A

Purchasing and Stores Department

Goal

To secure quality materials and equipment for City departments at the best available competitive prices with best available delivery time.

1974-75 Objectives

To encourage and promote more competitive bidding through the expansion of the vendor search file.

To increase the number of companies bidding on purchase items by increasing the number of bid invitations mailed, in order to achieve a higher average of bid quotations per purchase order.

To increase the percentage of purchase requests processed within deadlines.

Measures of Efficiency and/or Effectiveness	Actual 1972-73	Estimate 1973-74	Target 1974-75
Bid invitations mailed	8,059	8,500	9,000
Average bid quotations per purchase order	N/A	3	3.5
Percent requests processed within deadline	N/A	95%	95%

Goal

Properly anticipate and have readily available all repair parts and maintenance supplies required to maintain the City's fleet.

1974-75 Objectives

To increase the percentage of parts requisitions that can be filled immediately from stock.

To reduce the average acquisition time for parts from local sources.

To reduce the year-end losses from parts obsolescence, through improved controls over restocking and stock exchanging.

Measures of Efficiency and/or Effectiveness	Actual 1972-73	Estimate 1973-74	Target 1974-75
Parts requisitions filled from stock	56%	60%	65%
Average parts acquisition time from local sources (in hours)	1.5 (est.)	1.3 (est.)	1.0
Percentage of year-end inventory losses due to parts obsolescence	1.5%	1.5%	1.0%



## Goal

To provide as efficiently as possible an effective maintenance program that will quickly respond to all service requests and restore disabled equipment to prime operating condition as soon as possible.

### 1974-75 Objectives

To reduce the number of repair jobs which exceed the time specified by the standard job labour rate, established by motor equipment manufacturers.

To reduce response time for on-site aid to units distressed in the field.

Through work scheduling refinements, administrative controls, and incentives, reduce average repair related downtime.

Measures of Efficiency and/or Effectiveness	Actual 1972-73	Estimate 1973-74	Target 1974-75
Average job time excess over flat rate	15% (est.)	10% (est.)	8%
Average elapsed time (in hours) for on-site aid	1.2 (est.)	1.0	.75
Average repair related downtime (in hours)	4.0 (est.)	3.2 (est.)	3.0

## Data Processing Department

### Goal

To provide an efficient and effective service which will continually meet all automated information processing needs of City departments and related agencies.

### 1974-75 Objectives

To increase the ratio of accurate information to the total information provided to all City departments/agencies during the next fiscal year.

To increase the ratio of accessible, readily usable information to total information provided to all City departments/agencies during the next fiscal year.

To increase the ratio of the number of requests for Data Processing services processed on schedule and within budget to the total number of requests processed for all City departments/agencies during the next fiscal year.

Measures of Efficiency and/or Effectiveness	Actual 1972-73	Estimate 1973-74	Target 1974-75
Number of requests processed for program or system modification	N/A	160	172
Number of requests processed for new or special reports	N/A	40	42
User service ratings of Data Processing Services in percentages	N/A	79	84
Productivity, ratio of accurate and on time jobs processed to total processing time in jobs/hr.	N/A	6.10	6.11
Average terminal response time in seconds	N/A	5.0	5.0
Project/task performance, the ratio of items completed on time and within budget to total project/tasks completed	N/A	.77	.80

B FISCALLY ORIENTED MEASURES

The following examples represent recent attempts to incorporate performance measurement into the budgetary process. These attempts are grouped under the headings of planning programming budgeting system (PPB) and zero based budgeting (ZBB).

Planning programming budgeting (PPB)

LAKEWOOD

Since 1975 the City of Lakewood, Colorado,<sup>17</sup> has embraced the concept of PPB enthusiastically. In 1976, the Municipal Finance Officers' Association awarded the city its Louisville Award in recognition of the work that Lakewood had undertaken in the budget reform area.

The 1977 budget followed the pattern established in the previous two years of breaking down the budget into a program format giving indications of performance and performance objectives. Along with the program breakdown, the budget was also presented by department giving expenses for personnel, operation and maintenance, supplies, charges and services and capital outlay.

The program breakdown for 1977 was as follows.

Programs

Safety	Traffic regulation Law enforcement Judicial system Enforcement Support services
Transportation	Street improvement Street maintenance Mass transportation
Environment	City environment Drainage systems

Leisure	Recreation Parks Human resources
Development	Land use Housing
Administration	Representation General government Financial services Personnel services Legal services Support services Non-departmental

Each of these programs was broken down into more specific operational programs. For instance within the 'Safety' program a specific program of 'Traffic Regulation' was 'Traffic Activities'. This was presented as follows.

Program – Traffic Activities

Program Description

Provide traffic patrol and control traffic law enforcement. To include traffic accident investigation to facilitate the safe flow of both vehicular and pedestrian traffic.

Performance Objectives

- 1 To prevent any increase in fatal traffic accidents.
- 2 To decrease traffic injury accidents by 15.0%.
- 3 To decrease non-injury traffic accidents by 10.0%.
- 4 To increase enforcement actions taken by 11.0%.
- 5 To insure patrol agents' staff hours devoted to traffic activities do not exceed 15% of their total time.

17 See Performance Measurement Programs, Lakewood, Colorado, Appendix II.

Indicators of Performance Measurement	Objective	1975 Actual	1976 Estimate	1977 Projected
Demand				
Department Objective:				
Time Budgeted for Patrol Agents	5	20%	11.3%	15%
Registered Vehicles	1-5	93,556	96,363	99,158
Total Traffic Accidents	1-3	5,901	4,876	4,388
Workload				
Summons Issued	4	13,912	12,935	14,500
Accident Reports Prepared	1-3	5,463	4,876	4,388
Percent Patrol on Traffic Activities	5	11.3%	11.3%	15%
Productivity				
Time Spent per Summons	4	14 min.	14 min.	14 min.
Time Spent per Accident Report	4-5	40 min.	40 min.	40 min.
Effectiveness				
Percent Change:				
Fatal Accidents	1	+40%	0%	0%
Injury Accidents	2	+6%	—	—
Non-Injury Accidents	3	—	—	—

### Analysis

The number of accidents requiring a response by an agent will continue to decrease. This reflects an expected drop in the number of injury/non-injury accidents and the continued policy of not responding to private property accidents. Cost decreases in this program are primarily due to adjusted motor pool charges and reduced expenditures for wearing apparel.

Resources				
Category	1975 Actual	1976 Budget	1976 Revised	1977 Budget
Personnel	—	—	—	—
Operating/Maintenance Supplies	—	—	—	—
Charges & Services	—	—	—	—
Capital Outlay	—	—	—	—
TOTAL	—	—	—	—
Source of Funds				
	—	—	—	—



The attempt by the City of Cincinnati<sup>18</sup> to implement city wide performance budgeting appears to have been successful. As described by the director of the City's Budget and Research Office, the main purpose was to stress both activity accounting and activity accountability through the use of an organizational coding system that captured expenses associated with individual work program performance. Under this approach, both personnel complement and cost information data were recorded and reported for three organizational levels — department, division and section. Budgetary reports prepared for the operating agencies were based upon the work programs which were set up to parallel basic organizational units in a division. Provision was thus made for the collection of significant aspects of operating expense for the division head and his section supervisors. At the same time the need for both budgetary and administrative latitude was recognized by making appropriations at the division level.

#### Problems Encountered

In areas where precise costing was necessary, e.g. utility operations, and on projects partly financed with matching funds from other governmental jurisdictions, the application of cost accounting was both simple and inexpensive. It is not clear, however, where the cut-off point was to be made, i.e. where cost information collection was to stop. (This early attempt at determining quality obtained for money spent, uncovered problems that are still being grappled with by municipalities.) In the engineering division, difficulty was encountered in establishing effective work units to measure project design and surveying. Accounting for manhours expended by division personnel normally assigned to several work programs was also a problem.

Another admitted problem was the difficulty of reflecting quality in such activities as inspections, purchasing or planning.

In the case of planning, the City Planning Director endorsed performance budgeting but was also quick to point out that planning department work was not easy to measure. Work quality often took years to evaluate and often extraneous circumstances might affect that quality.

In the purchasing area it was difficult to define a work unit. One of the objectives of the centralized purchasing office was to reduce the number of purchase orders issued through combined purchasing. Thus, the number of orders in itself did not reflect work effort involved.

#### Two Part Budget

In addition to the cost accounting system, Cincinnati employed a two part budget (a strategy which has since been adopted by many municipalities in their attempts to use PPB.)

The purpose of this approach was to emphasize budget

programs and requests that were worth more than just routine examination, by separating them from traditional items where acceptance was generally a matter of course. Thus, fund allocations in the basic budget dealt with normal recurring activities already approved and operating. The basic budget represented operating needs based on the current level of personnel and the expected continuation of a level of service already established. On the other hand, the supplemental budget dealt with requests that were beyond established levels. This budget included proposals for the expansion of existing services, the commencement of new ones and the expansion of personnel.

The City realized the following advantages in utilizing the two part budget:

- 1 the time spent on budget matters by the City Manager and the finance committee was reduced since controversial or complex budget matters were highlighted for special attention;
- 2 most of the basic budget requirements have been determined prior to the departmental budget hearings and are routinely handled; and
- 3 the separate determination of budget requirements improved the accuracy of the City's budgeting.

#### Benefits

Tighter control of monies spent, an increased awareness of accomplishment per dollar spent, and a more streamlined budget approval process were some basic aims of the Cincinnati Office of Budget Research. Following a decade of experience with the system the office has reported that Performance Budgeting has turned out to be clearly superior to former systems. Key improvements have been; increased efficiency through its use by administrators as a managerial tool, more accurate and meaningful reporting of the budget to the public, the speeding up of the budget approval process, and more financially accurate future planning.

In a historical context the Cincinnati experience was a precursor of subsequent municipal practice with regard to the improvement of performance through budgetary techniques. Municipalities today still use two part budgets as an attempt to expedite budget approval. The problems with justifying the value of cost accounting systems and 'fine tuning' them still exist, however, and new methods are constantly being examined in different locations.

#### LOS ANGELES

A six year experiment with performance measurement by the City of Los Angeles<sup>19</sup> has produced mixed results. While meaningful performance measures were established, significant differences were noted in the areas of design of the reporting system, management decentralization, and the degree of legislative participation.

Unlike the Cincinnati experiences, the Los Angeles attempt did not have any relationship with the accounting system. Originating from the City Administrator's Office, the performance budgeting system was originally intended to function on information coming to that

18 See Performance Measurement Programs, Cincinnati, Ohio, Appendix II.

19 See Performance Measurement Programs, Los Angeles, California, Appendix II.

office. However, as the CAO was unable to get the type of information he needed from the accounting area, he opted for the establishment of a reporting system built on resource expenditures by individual managers. While this substitute may have created extra work, it showed itself to be one of the more effective components of the system. Adopting a man-hour approach, the reporting system gathered data on two items: the number of units of work performed and the number of manhours required to perform those units.

The basis for performance budgeting in Los Angeles has been its acceptance by both the elected and administrative bodies. The budget has acted as a form of contract between the two groups. While this concept did not originate with Los Angeles, the degree to which the execution of the budget was adhered to, as in a legal contract, was, in fact, quite a departure from normal.

The idea of a contract was strongly upheld by the presence of a particularly effective City Administrative Officer. Chief among his responsibilities has been 'contract control'. Acting as an intermediary between the administration and council, this appointed official has taken responsibility for assuring execution of the performance budget. This has been done chiefly through the initiation of 'work programs', the function of which was to provide reference points with regard to the timing, size, and nature of expenditures. As a result of the emphasis on execution and accountability, a close relationship developed between budget preparation and execution. Work programs were designed to form the basis for the original budget appropriations. An administration-wide reporting system which related units of work performed to manhours expended, provided a check of actual versus proposed performance.

A number of advantages were reported through the use of this system:

- 1 the CAO was able to keep informed on a wide range of operations using the single composite source of information; and
- 2 the information collected was often-times doubly useful, providing necessary input for reports to the Council, Mayor, etc.

A natural result was the emergence of the CAO as quite a powerful figure in the City. In addition, the management of the City was viewed by most to have become more centralized. This is in contradiction to the normal expectation associated with performance budgeting — it is supposed to increase managerial delegation of responsibility and result in an increase in cost consciousness. In seeking to explain this contradictory result, Sherwood and Eghtedari point out that the very capable CAO at the time had realized that the City's large and cumbersome departments were operating quite independently of one another. It was this realization which motivated the move towards centralization through the 'contract' format. These authors point out that even though an effort was made by top management to involve lower level managers, communication upwards was not forthcoming, probably due to feelings of uncertainty and unwillingness to be 'pinned down' to commitments. This experience thus suggests how others'

priorities, in this case, the need for control over a very large organization, can offset the predicted results of the performance budgeting approach. In summary, it should be noted that increased productivity was achieved without resorting to the performance budgeting prescription.

Performance budgeting is supposed to enhance legislative decision-making, by laying emphasis on program priorities, size, and timing rather than on program components and objects of expenditure across programs. It was hoped that this emphasis on programs would generate more interest and participation at the elected level. The opposite occurred, however — in general, council hearings on the budget had generated little debate. This result again seems contradictory to performance budget expectations.

In seeking an explanation for these apparent contradictions, interviews with the councillors showed that there was little appreciation of the performance budget review as a platform for policy changing. It was argued that since the performance budget is a more thoroughly researched document it had become politically risky to challenge its proposals, and so participation decreased. Yet this was not the sole cause, and the authors point out that this decrease in meaningful participation may have been simply a continuation of an existing trend. Councillors in Los Angeles are full time officials who meet daily with various committees and who are working throughout the year with the Mayor, the CAO and special interest groups. There is much time devoted to both policy and following the budget through its formative stages. As a result, final approval of the budget has not, in recent times, been an important forum for change.

The Sherwood and Eghtedari study of Los Angeles' performance budgeting experiment reached some positive conclusions about the system at the same time that it posed some interesting questions. The Los Angeles experience suggested that:

- 1 the performance approach can result in a strengthening of the executive budget ... and can have an effect on program planning and the central control of decisions going into the executive budget;
- 2 the measurement of work in a governmental jurisdiction is practical and feasible and there are positive benefits to be gained from such measurement; and
- 3 the performance budget need not be based on the accounting system.

The following questions were raised.

- 1 Does the performance budget tend to inhibit legislative participation in the budget process? Does formal legislative participation in the budget process become less important (and perhaps unnecessary) when the legislative body is kept continuously aware of the financial condition and needs of the jurisdictions throughout the year?
- 2 If we assume that an abdication of legislative involvement does take place, are we prepared to pay such a price for an increased grasp of budget decisions by the chief executive, plus the managerial benefits?



- 3 How should performance information be used in managerial appraisal? Will we be able to develop an appraisal system (i.e. standards) sufficiently rational to make the accumulation of such hordes of data a useful expenditure of time?
- 4 In strengthening the executive, does the performance budget also set into motion forces incompatible with organizational decentralization?

#### PHOENIX

By 1969, the Phoenix<sup>20</sup> City Council realized that some kind of wide-ranging planning and budgeting reform was needed if it was to be able to supply an increasing number of effective services to a growing city. Various groups in the city were voicing increasing concern over the cost of municipal government and increasing interest about where their tax dollars were going. These concerns resulted in a premium being placed on developing programs based on community needs and well-defined goals and objectives. There had recently been considerable citizen participation in formulating overall goals for the city through the Phoenix Forward Program. Thus, it was important that municipal programs and services be compatible with, and contribute to these goals, as approved by Council. Limited revenue sources made the establishment of relative priorities among competing programs extremely important. As the municipal government grew it became more important to have good procedures for making choices between programs and service levels and to be able to measure the efficiency and effectiveness of the City's efforts.

A nationally-known consulting firm was engaged to conduct a management study. This study reviewed the adequacy of the City's budgeting system and operating procedures, assessed other management systems and techniques for planning, controlling and evaluating municipal services, and finally recommended the implementation of a PPB system over a period of three years. Council adopted this recommendation and employed the consultants to help with the implementation.

By August 1970, the Budget and Research Department had been reorganized and expanded to enable it to provide internal guidance in bringing in the system, and a plan for introducing PPB had been established. This plan set out fifty-plus steps (including some 'go/no go' decision points), assigned responsibility for each step to specific individuals, and provided target completion dates. The following practical considerations were incorporated into the plan:

- 1 central budget and research staff must first gain a working knowledge of PPB techniques;
- 2 introduction of PPB should be worked around the existing commitments of the Budget and Research Department;
- 3 improving program analysis and assessment of program alternatives should be given top priority;
- 4 there should be some immediate pay-off in the next fiscal year; and

- 5 PPB efforts should follow a long-range and realistic plan.

The first step taken was to school Budget and Research Department analysts in the basics of PPB and program analysis techniques. This step provided not only a staff group who could perform the analytical work called for by PPB, but also a core of enthusiastic and committed supporters of the system.

The second step called for the development of issue papers on several high priority program problem areas, designed to provide immediate pay-off from the training of the analysts.

Briefly, the steps in the implementation of the system were as follows (each step consisted of a number of sub-activities):

- 1 formulate, review and approve a multi-year plan for PPB implementation;
- 2 develop and install in several departments, performance reporting systems compatible with anticipated future PPB developments;
- 3 select one department and develop and install a pilot PPB system;
- 4 carry out a pilot program of issue analysis in a high priority area;
- 5 determine the usefulness and success of the pilot project;
- 6 carry out three months of issue analysis in high priority areas;
- 7 establish goals, objectives and program statements for each department for use in the budgeting and performance measurement processes;
- 8 identify and select organizational units for PPB system expansion;
- 9 develop guidelines and instructions for expanding the system into other departments;
- 10 conduct orientation sessions for department and division heads in PPB concepts and further implementation plans;
- 11 determine and resolve analytical staffing and training needs in the various departments;
- 12 select and train staff in the departments in PPB concepts and techniques;
- 13 develop a design for a program review subsystem in participating departments;
- 14 review and modify the program review subsystem;
- 15 review and approve finalized program review subsystem and possible changes in the organization structure;
- 16 establish data collection and performance review procedures to monitor progress of unit programs; and
- 17 review the status of the PPB implementation efforts and make further refinements of the system.

The above steps were carried out in Phoenix over a period of about 40 months up to June, 1974.

<sup>20</sup> See Performance Measurement Programs, Phoenix, Arizona, Appendix II.



Each year from 1972, several 'Program Analysis Reviews' were carried out in selected departments by the analytical staff of the Budget and Research Department. These studies used classic PPB techniques, especially cost/benefit analysis, to set and revise program goals and objectives, determine present and desired service levels, evaluate program effectiveness and potential service level changes and related costs or savings. Such studies have now been carried out in almost all city departments, and several follow-up studies have been completed.

Since 1973-1974, the annual budget has been presented in a program format including departmental goals and detailed operating objectives. Each of the nine program areas is broken down into a number of sub-programs. The 'general government' program area has the most with nineteen. The eight other program areas are criminal justice, public safety, transportation, sanitation, community enrichment, water resources, urban development and housing, and economic development and opportunity. The transportation program will be used as an example.

The transportation program area is made up of nine programs — street maintenance, street improvements, storm sewer improvements, public parking, traffic engineering, street lighting, aviation, transit, and transportation research. Using street maintenance as an example, the goals and objectives for that area are as follows.

#### Street Maintenance Program Goal:

Assist in providing for the safe and expeditious use of public streets and alleys through a regular street maintenance program, minimize danger to life and property through the control of irrigation and storm water, and assist in maintaining acceptable aesthetic standards for public streets and alleys.

#### Example Program Objectives

- 1 Repair all chuckholes on major and collector streets within 72 hours of notification compared to a desired level of response within 24 hours.
- 1 Continue to grade 85 out of a desired 121 miles of unpaved Class D streets monthly.
- 3 Mow weeds from the 162 miles of unimproved shoulders of major and collector streets four times a year to achieve desired objective.
- 4 Sweep all 50 curbs miles of downtown streets daily.
- 5 Sweep 3,824 curbs miles of local and low-use major and collector streets every 5½ weeks compared to a desired level of every four weeks.
- 6 Clean 95 miles of drainage ditches once every 7 months to achieve 85% of desired objective cleaning every 6 months.

City officials claim that their PPB system, with its emphasis on productivity improvement, has resulted in substantial efficiency and effectiveness improvements. Because Phoenix has experienced considerable growth over the past few years, all savings have been in terms of cost avoidance rather than cost reduction but they have been considerable. The Work Planning and Control

part of the program worked to improve the efficiency of employees, and by mid-1965, measureable manpower utilization had increased to the equivalent of 324 man-years since the start of the program. That 324 man-years constituted a cost avoidance saving of \$3.1 million.<sup>21</sup>

Program Analysis Review studies have resulted in improved methods in several aspects of the City's operations. For example, refuse collection crews were reduced and operations were mechanized resulting in avoided costs amounting to \$3.6 million. Fire protection effectiveness was increased through improvements made as a result of Program Analysis Review recommendations. This had the effect of upgrading the City's fire defence rating, resulting in lower insurance costs throughout the City. The cost/benefit ratio of the program has been estimated at 1 to 4½, or for every dollar spent on the program, \$4.50 has been returned in benefits.

Some problems have been encountered with the system. Confrontations between the consultant and staff analysts on one hand and line department officials on the other were frequent during the early stages because of a desire by the former parties to move too quickly and to be able to show immediate results. Several minor labour grievances occurred as a result of changes in procedure made in the quest for efficiency. It was believed that these could have been avoided if a more sympathetic and understanding approach to introducing change had been adopted.

In total, however, problems with the PPB system in Phoenix have been relatively slight. For the most part, the system was implemented slowly and deliberately and each step was carefully planned. Analytical capabilities were developed early on in the implementation program. Goals and objectives were established and made integral components of the budget. A performance measurement system was set up to provide the information needed for program analysis. Support from Council and top management was strong and continuous.

The PPB system seems to be firmly entrenched in Phoenix now. Goals and objectives are periodically revised and updated. The performance measurement system continues to evolve and improve. The analytical talents that have developed in the City are put to effective use. The particular program structure chosen for Phoenix seems to suit the needs of the City.

Thus Phoenix is a good example of a relatively successful implementation of PPB at the local government level.

#### SAN DIEGO

The City of San Diego, California, became involved with PPB in 1973.<sup>22</sup> At that time a special task force was set up to recommend a structure and measurement sys-

21 The information in this and the succeeding paragraph has been taken from Charles E. Hill, *Organizing for Productivity*, presented at the Annual Conference of the International City Management Association, Seattle, Washington, September 29, 1975.

22 See Performance Measurement Programs, San Diego, California, Appendix II.

tem for the budgetary reform. The system chosen was more simple than is suggested by the PPB approach in that interdepartmental program structures, multi-year programs, financial plans and program alternatives were not included. The system was basically, therefore, a move to put the budget in program form. The essential components of the adopted system were as follows.

- 1 Program Structure — improved delineation of programs contributing to department’s basic objectives.
- 2 Objectives — more specific and quantifiable statements of intended end-products or results of programs.

- 3 Output Measures — more meaningful measurements of program end-products or results.

Thus the system involved the establishment of objectives, the setting up of programs to achieve those objectives and the determination of measures to act as indicators of achievement.

The format of the budget process adopted included the traditional operating budget but it also displayed the following information:

- 1 revenue by program and program element;
- 2 long-range department goals and one year program and program element objectives; and
- 3 summary of capital improvements program and cross-reference to operating budget.

The following are illustrations of proposed program objectives and output measures for the city.

Department	Program Element	Objective	Output
Building Inspection	Structural Plan Checking	Perform structural plan checks on 3,650 plans having an estimated valuation of \$295.4 million.	Number of structural plan checks (C)* Valuation of plans checked (C) Average time of plan processing (B)
Fire	Administration	To lower fire cost. To lower fire deaths and injuries.	Fire cost per assessed valuation (B) Fire deaths and injuries per capita (A)
	Fire Suppression	To control and extinguish fires.	Average loss per fire by occupancy (A) Average response time per fire (A)
	Equipment Maintenance	To insure availability of fire apparatus and equipment as needed.	Number of times fire apparatus or equipment is unavailable for service (A)
	Fire Communications	To receive and interpret request for emergency aid quickly and efficiently.	Average dispatch time (A)
Data Processing	Computer Operations	To operate the computer system with a minimum of errors.	Number of operator errors (A)
Water Utilities	Pipelines and Conduits	To maintain pipelines, conduits, and patrol roads.	Cost per mile of pipeline and conduit maintained (A)
	Safety and Training	Reduce total number of reported injuries by 5%.	Number of reported injuries (A)
Property	Clerical Support	To increase efficiency through a reduction in clerical costs per unit of production.	Cost per unit of production (B)

\* (A) Connotes Effectiveness Measure  
 (B) Connotes Efficiency Measure  
 (C) Connotes Basic Workload Measure



## Zero based budgeting (ZBB)

Zero based budgeting is the most recent technique to be applied in budget reform. As with most new techniques the first organizations to adopt ZBB were in the private sector. Consequently an example is given of the implementation of ZBB in industry, in this case within Westinghouse Canada Ltd.

### WESTINGHOUSE CANADA LTD.

Once the Westinghouse top management were committed to ZBB (Westinghouse prefers the term Zero-Base Planning) the company implemented the technique in earnest in July, 1976.<sup>23</sup> Westinghouse's interpretation involved the development of 'decision packages' by the different organizational units. The 'decision packages' involved the following.

- 1 Package name — a description of the organization unit or program concerned
- 2 Department — under which the unit falls
- 3 Budget number
- 4 Summary of decision package increments — outlining changes expected in the upcoming period needing additional funds
- 5 Statement of mission or purpose —
- 6 Description of current operation —
- 7 Planned method of accomplishing mission in the next period —
- 8 List of alternatives considered and reasons for rejecting —
- 9 Incremental expense analysis —
- 10 Prepared by —
- 11 Approved by —

Each of the increments discussed in this summary analysis (sections 4 and 9) is further outlined and ranked in an incremental analysis.

This analysis is composed of the following sections.

- 1 Package name
- 2 Department
- 3 Budget number
- 4 Rank
- 5 Description of output produced by this increment
- 6 Description of benefits of this increment
- 7 Consequences of not approving this increment
- 8 Resources required
- 9 Performance measurement
- 10 Prepared by
- 11 Approved by

Once the vice-president for each of the different headquarters has developed his decision package and rankings, these are reviewed by special task forces appointed by the company president. Each task force (one per headquarters VP) reviews these packages with the VP. The task forces are expected to make appropriate inputs relating to such things as:

- 1 possible organizational changes;
- 2 apparent overlaps and redundancies;
- 3 decision package definition and priority;
- 4 feasible alternatives which were not considered;
- 5 other approaches to providing the outputs of the budget centres being reviewed; and
- 6 outputs which might be entirely eliminated.

Each of these special groups is chaired by a VP from an operating department and outside consultants often sit on the team. The groups act as advisory bodies only and report to the VP in question. He still retains responsibility for the deployment of resources.

To help establish the program in the organization, Westinghouse has designed a zero based planning manual organized around a 12 step description of the application of the system. Much of the success of the company's ZBB effort has been the result of this carefully planned process, the steps of which are outlined below.

- 1 Clearly define the goals and objectives which the budget centre (in each department, division, etc.,) is supposed to support.
- 2 Define the common assumptions which are to be used in the budget planning process.

(Although certain assumptions, such as anticipated wage and salary increases, increases in costs of supplies, etc. are obvious, others, such as changes suggested by managers outside relevant divisions or departments, changes arising out of legislation or regulations, and changes due to broadly applied management decisions, are not so obvious, and an effort should be made to anticipate such changes if possible.)

- 3 Define the mission or purpose of the organizational unit.

(If the mission or purpose of the organizational unit cannot be described, questions should be raised about the effectiveness of that organizational unit.)

- 4 List and analyze the department output.

(What activities are performed, services provided or programs operated, in support of the department's objectives? What resources does it use and what does it produce?)

- 5 For each project, work assignment and element in the organizational unit, ask the question: Should this be done next year?

(One of the most difficult steps in the process. Someone closely associated with an activity or function for many years may find it difficult to view that activity with detachment.)

- 6 Consider carefully all feasible alternative ways of providing the outputs which survive the screening in step #5.

(The most creative step in the process, this step is intended to counteract the tendency to view the way an output has always been provided as the only possible way to do the job.)

<sup>23</sup> See Performance Measurement Programs, Westinghouse Canada, Ltd., Appendix 11.



The preceding steps cover an in-depth analysis of the organization's present position. The following steps represent the most critical aspect of ZBB, the final process of prioritization and selection. These steps involve 'decision packages' which are defined as discrete activities or outputs that can be influenced by management decisions. Decision packages provide the data base upon which all future decisions will be based.

- 7 From the list of alternatives developed in step #6, select the one which will produce the required output with the greatest cost effectiveness.

(This selected alternative forms the basis for developing a decision package. All other alternatives considered and rejected are summarized briefly in a report format.)

- 8 Prepare a decision package incremental analysis based upon the minimum possible level of output and resources needed for the alternative chosen in #7.

(The minimum level is defined as that level of output and effort below which the decision package ceases to be viable. The Westinghouse model states that the minimum package level should be developed at or below 70% of the actual level of expenditure except in very unusual circumstances. This procedure is intended to force the department manager to look at his decision package in a very stripped down configuration. This step, in effect, asks the manager to describe the minimum level of output and effort which would allow the operating unit to remain viable.)

- 9 Prepare additional decision package incremental analyses describing discrete levels of output and resources.

(Above the minimum level, as described in step #8, as many incremental levels may be described as is practical. An increment must be a discrete element. It should not involve fractions of people, services or functions that cannot be isolated from other packages or levels.)

- 10 Indicate recommended package level and have complete package approved by the superior.
- 11 Rank all levels of all decision packages in descending order of cost/benefit priority.

(At each supervisory or management level where budgets are consolidated, the manager must combine and rank in descending order of attractiveness, all levels of all decision packages for which he is responsible. Ranking tables are prepared and later merged at each higher level where organizational components are brought together under the control of one manager.)

- 12 Establish the funding level for department costs.

(A consolidated ranking table, presenting a range of funding opportunities from zero to the cumulative total of all packages prepared, is submitted to top management (or the elected level) for final deliberation. Once the affordable funding level has been established, a cut off point on the ranking table is fixed. Packages above the line are funded; those below are deleted.)

It should be apparent from the above that such a process needs strictly defined procedures and supporting material to succeed. A well thought out planning manual made acceptance of the approach a relatively simple matter in the Westinghouse system.

#### McMASTER UNIVERSITY

An example of a non-industry application of ZBB is that of McMaster University of Hamilton, Ontario.<sup>24</sup> Similarly to municipalities, Canadian universities have suffered from the economic recession and are seeking ways of improving management efficiency. Up until 1975 McMaster was using an incremental approach to budgeting but in that year the university decided to implement zero based budgeting.

McMaster breaks the concept down into two distinct stages.

- 1 The development of 'decision components'.
- 2 The ranking of these components.

In the 'development of decision components' each manager is asked to analyze and describe the discrete activities, functions or operations within his department, that when isolated, have minimum impact on other departmental components.

In order to determine the decision components in his area of responsibility each manager is asked to consider the following questions.

- 1 What is the size of the organizational unit? Five to seven priorities per component is average.
- 2 Could the component be considered as warranting a separate set of accounts and budgets within the department?
- 3 Is it best to see some components as not being mutually exclusive but as relating in a special way to other components?
- 4 Will the task force have a clear understanding of the component's function without being distracted by too much detail?

Decision components are developed on four forms which are outlined as follows.

#### Form #1 Decision Component Description

This form provides all the data pertaining to each component required for a realistic evaluation of the need for funding that component. The descriptions for each component may include a statement of objectives, how the objectives will be achieved, the benefits expected, spending level and personnel requirements and the effect on the unit and other unit operations of not funding the particular component.

- 1 Decision component title and number
- 2 Ranking number (From (1) essential – (6) not necessary for operations)
- 3 Survey of manpower
- 4 Objectives and descriptions of decision component
- 5 Operational and/or legal considerations
- 6 Current methods of operation

<sup>24</sup> See Performance Measurement Programs, McMaster University, Appendix 11.

- 7 Volumes and workload
- 8 Sources of input and direction of output of documents/data
- 9 Benefits of operating the work unit
- 10 Evaluation of the unit effectiveness
- 11 Consequences of reduction or denial of funds

#### Form #2 Alternatives

- 1 alternative policies that should be considered; and
- 2 alternative systems that should be considered.

#### Form #3 Financial Detail

On this form are identified the resources relating to the component under review.

#### Form #4 Summary

This form represents a summary of all the components within the entire department.

The process then enters into the second stage, where the components are ranked according to priority. This stage involves first, a review by the senior line management. Department heads rank components in consultation with Division heads. Second, the components are reviewed by a special task force of the President's Budget Advisory Committee (PBAC). Eight task forces are set up to review designated areas of the university. Each of these task forces consolidates the priority rankings for all the units being reviewed and the PBAC itself effects a university wide consolidation of all units.

A financial 'fit' is then determined, with lower level priority units being identified for dissolution or winding down.

### C PROGRAM ORIENTED MEASURES

The process of program measurement involves many of the measurement techniques so far discussed. Its purpose is to assess the effectiveness of programs to determine if the program should be continued and, if so, how it should be improved. Consequently, it is a very broad process covering many aspects of the organization and how that organization relates to its environment. An example of how broad and comprehensive the process can be is given in the following twelve-step cycle suggested by one group concerned with program and project evaluation.<sup>25</sup>

- 1 Problem and needs analysis
- 2 Formulation of goals
- 3 Adoption of strategies and priorities
- 4 Establishing programs
- 5 Resource allocation
- 6 Project funding
- 7 Project performance
- 8 Project monitoring and change
- 9 Measuring project performance
- 10 Program analysis
- 11 Goals translation
- 12 Internal redesign

The following gives examples of program areas to which program evaluation may be applied. This particular example refers to possible subjects of individual

program evaluation and improvement in a Police Department.<sup>26</sup>

### Program evaluation

#### Surveillance

- a An alternate mix of forces such as a major change in the composition of foot patrols vs. one-man police cars vs. two-man police cars vs. plain-clothes patrolmen vs. detectives, etc.
- b A neighbourhood policing program.
- c Reallocation of police by geographical location or time of day and day of week.
- d New communication devices.

#### Fire Control

- a New firefighting procedures, equipment or vehicles.
- b New communication devices.
- c Reallocation of firemen and equipment by time of day or geographical location.

#### Highway/Street Lighting

- a New types or quantities of lighting in certain parts of the community (both in reducing crime and traffic accidents).

#### Solid Waste Collection

- a New collection equipment.
- b New types of containers for refuse.

#### Solid Waste Disposal and/or Water Treatment

- a New equipment or procedures.

#### Recreation

- a New recreational programs, e.g., opening school grounds on weekends.
- b Selected existing programs and activities.

#### Employment Programs

- a New types of training programs.
- b A new job generation and matching program.

#### Transportation

- a Revised traffic control arrangements.
- b Revised public transit routings or new bus lanes.
- c New equipment.

#### Health

- a Various drug abuse treatment programs.
- b Maternal and infant care clinic hours of operation or locational changes.
- c Special publicity campaigns for attracting persons to VD clinics or alteration of clinic location or hours of operation.

An important component of program evaluation is the determination of goals and objectives for the program under consideration. Once these have been established

<sup>25</sup> 80, pp. 10-11.

<sup>26</sup> Ibid.



their achievement becomes a measure of how effectively the program is being carried out. These measures, of course, should be supplemented with a type of effectiveness measure, client feedback, etc. These measures should help evaluate the goals and objectives.

The following gives examples of program goals and objectives. In this case, the problem addressed is auto theft and the department concerned is a police department. The problems are outlined and the goals and objectives designed to approach these problems are given.<sup>27</sup>

#### 1 Nature of Problems and Needs to be Met

- a The exposure to motor vehicle theft is increasing as shown by the growth of motor vehicle registration: 1960 - 4,660,500; 1970 - 6,872,000, an increase of 47.45%.
- b Nearly 50,000 motor vehicles, boats and units of heavy equipment are stolen annually in this state with \$35 million annual loss.
- c Motor vehicle thefts in the state increased from 15,147 in 1960 to 39,110 in 1970, an increase of 158% in 10 years.
- d Statewide clearance rates on motor vehicle theft have declined from 33% in 1967 to 24% in 1970.
- e Recovery rates have declined for the last several years, dropping from 94% in 1960 to 83% in 1970. The recovery rate on motorcycles in 1971 was only 39%.

#### 2 Goals and Objectives

Project Goal: Reduce rate of motor vehicle theft by 5% over 1971.

##### Specific Objectives:

- a Increase clearance rate on motor vehicle theft cases by 5% over 1971.
- b Improve statewide recovery rate by 3% over 1971.
- c Reduce number of motor vehicle theft cases referred to NATB by 5% over 1971.
- d Increase recovery rate on NATB referred cases by 5% over 1971.

##### Department Objectives:

- a Increase DPS arrests for motor vehicle theft and related offenses by 5% over 1971.
- b Increase DPS motor vehicle recovery rate by 5% over 1971.

##### Non-quantified Project Objectives:

- a Improve reporting and investigative procedures at the state and local level, including the establishment of a reliable data bank.
- b Make trained auto theft investigators available to

assist all law enforcement agencies hopefully resulting in more cases and better prosecution.

- c Create a closer liaison and better co-ordinated efforts among DPS divisions and services.
- d Secure legislation to combat vehicle thefts and successful prosecution, including salvage title laws on motor vehicles.
- e Initiate permanent identification stamping with dies on heavy equipment and boat motors.
- f Improve the co-ordination of all law enforcement agencies in connecting motor vehicle theft with other crimes and theft rings.

Very few local governments have initiated a full program evaluation process, perhaps because it requires a considerable commitment on the part of the organization. Three municipalities that have attempted program measurement are Fairfax County, Virginia, the District of Columbia and the Region of Niagara, Ontario.

##### FAIRFAX COUNTY, VIRGINIA

One local government that has initiated program measurement particularly well is Fairfax County in Virginia.<sup>28</sup>

In June, 1972, the county executive established a Management Statistics Committee. The purpose of this committee was to develop a management indicator system that would help to determine the effectiveness of county programs and agencies and measure progress towards specific goals and objectives.

The work program was divided into three major tasks:

- 1 development of a series of goals and objectives for each county agency;
- 2 development of a series of management indicators or measures of effectiveness which reflect progress toward the achievement of goals and objectives.
- 3 determination and evaluation of the needs and availability of information in the county which would allow the reporting of the information identified as indicative of performance.

Implementation of the program is the responsibility of the Office of Research and Statistics whose research analysts collect the data and analyze major deviations from targeted levels of performance. Every month, a comprehensive report, usually of more than 250 pages, is presented to the county executive (the time lag is about 17 days) fully documenting the performance of the county and pointing out areas of concern.

##### DISTRICT OF COLUMBIA

On July 1, 1973, a new performance monitoring system commenced in the District of Columbia.<sup>29</sup> The basic strategy of the Office of Budget and Financial Management (OBFM) in implementing the system contained six major steps.

- 1 Agencies met with the OBFM to discuss performance monitoring plans and explored agency participation.
- 2 OBFM briefed program managers on performance monitoring and performance criteria and perfor-

<sup>27</sup> Ibid, pp. 25-27.

<sup>28</sup> See Performance Measurement Programs, Fairfax County, Virginia, Appendix II.

<sup>29</sup> See Performance Measurement, Government of the District of Columbia, Appendix II.



mance measures were developed with agency assistance.

- 3 Agencies and OBFM agreed on performance targets for appropriate measures.
- 4 OBFM issued implementation instructions containing performance report forms and procedures to agencies participating in the system.
- 5 Agencies implemented the system fully and began to collect and report program performance data.
- 6 Other agencies not selected for initial participation were added to the system in accordance with a time phased plan.

#### REGION OF NIAGARA

An example of program measurement which stems directly from the LGMP is that of the Day Care Program organized by the Homes for the Aged Department of the Ontario Region of Niagara, in 1975. The LGMP Team were able to assist almost from the start of this program. At the time the Team became involved, the Homes for Aged administrators had established that a need existed in the community for such a program. The Team assisted the program administrators to develop and clarify the purpose of the program, goals, objectives and indicators. This process helped in organizing the program in such a way that it could achieve its basic purposes. Through joint problem identification, problems such as ineffective reporting relationships, were identified at the outset and the necessary adjustments were made.

The goals that were established for the Day Care Program are as follows.

#### Goals

- 1 To make available an alternative to institutionalized care by providing preventative and supportive services to meet and maintain the individual needs of the senior citizens in the community for as long as physically and mentally possible.
- 2 To restore self-esteem, where required, to the individuals in the Program.
- 3 To inform the community of what we are trying to accomplish with the Day Care Program.
- 4 To make senior citizens aware of and make available to them information regarding all transportation facilities.
- 5 To encourage the maximum degree of independent

functioning in connection with community interests and activities.

- 6 To liaise and co-operate with other departments in the Homes.
- 7 To establish a self-sufficient Day Care Program within the community.
- 8 To constantly review the Day Care Program in order to ensure that it meets the current needs of the daily participants.
- 9 To arrange a sufficiently diversified program that it is able to meet the medical, nursing, recreational and social needs of the participants.
- 10 To promote an environment conducive to job satisfaction.
- 11 To provide the sound administrative and financial practices outlined in the Day Care Manual with the help of senior administrative staff, the program coordinator, the accounting department and the participants in the Program.

Once these goals were established more specific objectives and performance levels were set. The tables overleaf provide examples of objectives that flowed from the goals. Also included is an indication of the measures which were developed.

Initially the program was reviewed every three months. After the program became established, however, less frequent reviews were needed.

Although indicators were established to determine the degree of achievement of the objectives, the measures used to evaluate the program varied according to the level of responsibility and needs of the evaluator. General measures not shown on the tables included:

- 1 cost — day care is considerably less expensive than full time care. Consequently, the day care program saves money. This was a prime motivator and one of the main rationales for the program;
- 2 numbers involved in the program — a key target was twenty people involved in the program at each Home, giving a total of 80 altogether;
- 3 satisfaction of the people involved — the program was assessed on its ability to meet the needs of the users; and
- 4 peer ratings — some of the individuals involved were influenced by the reaction of other municipalities to the program. If other municipalities were impressed, the program was rated highly.

Goal Area Statement	Objective Statement and Levels of Performance (Current and projected)	Comments (Measuring device, comparable data, etc.)
To inform the community of what we are trying to accomplish with the Day Care Program.	Contact Service Clubs, Clergy and O.M.A. Schedule for: (1) letters to service clubs by November 14; letters for church bulletins by Nov. 7; literature for posting by physicians by Nov. 7; contact branch of O.M.A. by Nov. 7.	How many referrals from each group and how many inquiries?
	(2) Contact general public — poster in City Hall by Oct. 31. — poster in shopping malls by Oct. 31. — poster in pharmacies by Oct. 31. — ask Chamber of Commerce to have stores leave signs up permanently.	Judging by number of referrals and inquiries, is this as effective a method of recruiting as the contact with target groups in #1?
To arrange a diversified enough program that would meet the medical, nursing, recreational and social needs of the participants.	(1) Ask residents for input concerning the program of activities. — meet with residents every two weeks to gather opinions, criticisms, likes and dislikes.	How many participate?  How often?
	(2) Schedule active and passive activities on an alternate basis to involve all residents. — bowling followed by lunch — wake-up workshop followed by crafts.	How long?
To constantly review the Day Care Program in order to ensure it meets the current needs of the participants.	(1) Complete resident assessment sheets every 15 days. — investigate changes in residents immediately.	How many who did not respond to verbal inquiries answer the letter?
	(2) Letters to those who have not pursued the issue beyond completing the application. — find out why they stopped completion of the application.	Do any come to the program? Is undesirable behaviour or reaction dispelled?
To provide sound administrative and financial practices outlined in the Day Care Manual with the senior administrative staff, program co-ordinator, accounting department and participants in the Program.	Review procedures and maintain what is outlined in Manual.	Is the program operating within its budget?

Goal Area Statement	Objective Statement and Levels of Performance (Current and projected)	Comments (cont'd) (Measuring device, comparable data, etc.)
To encourage the maximum degree of independent functioning in connection with community interests and activities.	Maintain ongoing awareness of activities in community that may interest residents. — attend a Christmas bazaar at local church — keep social calendar for Welland posted in D.C. lounge.	Do any residents go to these functions on their own?  Do they want to go as a group to these activities?

### D MANAGEMENT PROCESS ORIENTED MEASURES

The Local Government Project concentrated primarily on management processes and activities. The LGMP Team believed that the best approach to management improvement was through management procedures and processes. Perhaps the best measure of these internal systems is to ensure that they meet the needs of the user and are in the best interests of the tax-payer. Goals and objectives were employed extensively by the LGMP. The explicit statement of purpose and intention, and measures for programs and internal systems are ideal for ensuring that the work is co-ordinated and carried out efficiently and effectively, irrespective of whether the department concerned is a support department or a line department. The following examples give some appreciation of the process content of goals and objectives in a support department and two line departments. In addition, some examples of process oriented objectives of individual managers are included. Finally, a brief description of LGMP experiments and progress with measurement in the four Project Municipalities is given.

#### 1 Support department goals and objectives

The following example represents support department goals and objectives. In this case, they apply to a Finance Department in one of the four Project Municipalities. First, the departmental goals are given in order of priority. The department is then broken down by areas of responsibility, programs within these areas are identified and the goal and objectives are established for each program.

##### FINANCE DEPARTMENT GOALS

###### Priority

- 1 To meet and consult more regularly with the user departments, with the objective of better defining their management and financial information needs, leading to the development and use of a more relevant and timely financial information system.

- 2 To explore alternatives in purchasing methods and procedures to permit more flexibility and user department acceptance, to be accomplished within a centrally co-ordinated system.
- 3 To identify E.D.P. user department requests for program changes and prepare a submission to the Data Processing Management Committee for consideration and establishment of overall priorities.
- 4 To participate fully in a computer feasibility study to assist the user departments to define and meet their management information system needs through an effectively updated five year plan.
- 5 To develop organizational administrative procedures to ensure a continuity of approach, strengthen internal control methods and complement staff training efforts.
- 6 To review the payroll system to satisfy the need for an improved E.D.P. approach that will eliminate the present onerous manual tasks and the many exceptions to the present basic system.
- 7 To develop a relevant account coding structure to allow input data to be pertinent to the needs of user department management and to outside reporting agencies.
- 8 To trace and document the need for and use made of user department requests for budget-to-actual financial information.
- 9 To review the allocation and use of staff resources within the department with the objective of improving work orientation, employee morale, workload distribution and to better identify staff interrelationships and work progress efforts.
- 10 To provide senior police management with manpower allocation and crime data in a report format which will provide the basis for improved resource allocation.



# Finance Department Goals and Program Objectives for 1977

General Responsibilities	Specific Programs	Program Goal	Program Objectives for 1977 over and above the regular duties required in each program
Administration	Advisory Service to Council, Standing Committees and other Departments	To develop policy and procedural alternatives as input to decision making by both elected and appointed officials, with regard to the general operation of the municipality and its financial management in particular.	<ul style="list-style-type: none"> <li>i To develop written procedures and policies in the areas of purchasing, budgeting and cash management.</li> <li>ii To increase Finance Department attendance at all standing committee meetings to increase awareness of municipal problems and projects.</li> </ul>
	Department Administration	To maintain Finance Department performance at the highest level through a process of goal setting, performance appraisal, review, and the measurement of achievement towards predetermined targets.	<ul style="list-style-type: none"> <li>i To develop performance measures for each Finance Department Program.</li> <li>ii Complete development of Central Filing System.</li> <li>iii Interview all management staff quarterly and all other staff annually.</li> <li>iv To eliminate file storage problems using microfilming.</li> <li>v To complete renovations of Finance Department Office.</li> </ul>
	Staff Development	To provide adequately trained staff to meet present and future requirements through an ongoing process of recruitment, in-house training and job enrichment.	<ul style="list-style-type: none"> <li>i To hold at least four in-house training sessions for Finance Department staff.</li> <li>ii To update all job descriptions.</li> </ul>
	Intergovernmental Affairs	To maintain the capacity to assess changing intergovernmental relationships and advise on policy re such changes.	<ul style="list-style-type: none"> <li>i To develop input to the Finance Report of the Commission.</li> <li>ii To finalize input to the Commission on Reassessment.</li> <li>iii To participate in the A.M.O. Board of Directors-Resolutions Committee.</li> </ul>

# Finance Department Goals and Program Objectives for 1977 (cont'd)

General Responsibilities	Specific Programs	Program Goal	Program Objectives for 1977 over and above the regular duties required in each program
Financial Stewardship	Preparation of Financial Statements — Monthly, Annually, Subsidy Claims, etc.	To develop and maintain a financial information system for operating departments, senior management and Council which will also accommodate the preparation of subsidy claims and financial reports on a timely basis.	<ul style="list-style-type: none"> <li>i To hold bi-monthly meetings with operating departments to improve interdepartmental communications and information flow.</li> <li>ii Finalize accounting system for water and sewage.</li> <li>iii To develop in-house back-up staff for Chief Accountant's position.</li> <li>iv To investigate operating reports from January onward.</li> </ul>
	Processing of Payroll	To process all municipal payrolls in accordance with contractual obligations.	<ul style="list-style-type: none"> <li>i Monitor new payroll system to ensure effective operation.</li> <li>ii Develop manpower reports from new system.</li> </ul>
	Processing of Accounts Payable	To process all accounts for payment in a manner which will ensure the accuracy, proper authorization and accounting for such payments after verification of the receipt of the goods and services ordered.	<ul style="list-style-type: none"> <li>i Development of a 'commitment system' for P.O.'s in conjunction with development of a Financial Core System.</li> <li>ii Identify processing time of invoice and improve where appropriate.</li> </ul>
	Cash Management	To ensure the investment of all surplus funds and the obtaining of required temporary borrowing at the most effective rates subject to any legal restrictions.	<ul style="list-style-type: none"> <li>i Development of written procedures to cover all borrowing and investing of funds.</li> <li>ii Introduction of a performance measurement based on "Standard Cost" principles.</li> <li>iii Introduce new borrowing by-laws.</li> </ul>

# Finance Department Goals and Program Objectives for 1977 (cont'd)

General Responsibilities	Specific Programs	Program Goal	Program Objectives for 1977 over and above the regular duties required in each program
Budgets	Preparation of Capital and Current Budget	To develop a system of capital and current budgeting which will reflect in an understandable way the allocation of financial resources to municipal programs based on established policy and priorities and which will indicate the sources of funds required to support the approval expenditures.	<ul style="list-style-type: none"> <li>i Identify 'programs' in all operating departments and recast 1977 approved budget on Program lines.</li> <li>ii Develop budget presentation format for current and capital budgets for use in 1978.</li> </ul>
	Preparation of Capital Budget Performance Reports	To develop and maintain a reporting system for Capital Works Projects which, on a timely basis, will give data on project progress, cash flow, subsidies carried, expenditures and commitments and ensure adequate project financing.	<ul style="list-style-type: none"> <li>i Introduce a system for accounting for capital projects which will facilitate financial control and reporting.</li> </ul>
	Current Budget Performance Reports	To develop current budget performance reports which will monitor budget performance, highlight budget variances and identify surplus funds for reallocation where required, as determined by Council.	<ul style="list-style-type: none"> <li>i Develop a policy for governing the method of changing the budget that increase budget administration flexibility while maintaining policy control at the elected level.</li> </ul>
Management Services	Provision of Data Processing Facilities	To provide required data processing capacity through the arrangement with the City of —for the processing of financial data.	<ul style="list-style-type: none"> <li>i Work with the City of—in reviewing and assessing future equipment needs.</li> <li>ii Review job descriptions of D.P. Manager and systems/analyst.</li> </ul>
	Analysis of Systems and Equipment Needs	To provide expertise within the municipality in systems analysis, programming and equipment needs.	<ul style="list-style-type: none"> <li>i Analyse operation of Homes for the Aged to assess needs for introduction of E.D.P. application and improved information flow.</li> <li>ii Develop programming for 'Financial Core' system.</li> </ul>



General Responsibilities	Specific Programs	Program Goal	Program Objectives for 1977 over and above the regular duties required in each program
Management Services (cont'd)	Development of new Financial Management Systems	To provide expertise within the municipality to research, develop and implement, financial management techniques designed to improve the overall efficiency and effectiveness of the municipality.	<ul style="list-style-type: none"> <li>i To develop a new chart of accounts as a basis for a comprehensive 'Financial Core' system which will include the complete mechanization of the accounting system in 1978.</li> <li>ii To develop Debt Registration Program.</li> <li>iii To review and develop a new system of equipment replacement financing.</li> </ul>
	Insurance	To review and manage all municipal insurance including the updating of asset valuations.	<ul style="list-style-type: none"> <li>i Review fidelity insurance amounts.</li> </ul>
Control Purchasing	Processing of Purchasing Requisitions, Expediting, Quotations and Tenders	To procure all goods and services required by the municipality at the lowest cost compatible with quality and delivery time and particular emphasis on the use of bulk purchasing.	<ul style="list-style-type: none"> <li>i Development of a purchasing procedural by-law.</li> <li>ii Determine performance measurement for purchasing activities.</li> <li>iii Reduce turn around time for issue of P.O.'s by —%.</li> <li>iv Improve expediting of P.O.'s.</li> </ul>
	Refinement of Central Purchasing Techniques	To develop and maintain expertise on market conditions and produce innovations with regard to such goods and services required by the municipality and to advise all departments accordingly.	<ul style="list-style-type: none"> <li>i Develop and maintain a comprehensive list of prices for classes of goods used in the municipality, for use in budgeting.</li> <li>ii Initiate regular meetings with Public Works/Social Services similar to those with Homes.</li> </ul>
	Surplus Assets	To maximize the return from or reuse of assets declared as surplus, obsolete or scrap.	<ul style="list-style-type: none"> <li>i Hold three major and three minor police auctions.</li> <li>ii Obtain adequate storage facilities and dispose of all 'scrap' and worthless 'assets'.</li> </ul>

Finance Department Goals and Program Objectives for 1977 (cont'd)

General Responsibilities	Specific Programs	Program Goal	Program Objectives for 1977 over and above the regular duties required in each program
Long Term Debt	Approval of Capital Works	To obtain all required Ontario Municipal Board approvals and to monitor and advise Council on the initiation of capital works by the municipality as to the availability of funds.	i Develop a system for measuring debt capacity in the municipality.
	Issuing of Long Term Debt	To have a continuing program of issuing long term debt to meet the financing requirements of the municipality at the lowest possible costs consistent with market conditions.	i Develop material for use in application for a 'credit rating' and to present such information to Moody's by June, 1977.
	Debenture Registration	To maintain records of all debentures issued to the public which are registered to Principal and Interest or Principal only.	i Develop and initiate computer program for recording all registered debenture owners and issuing all interest cheques.
	Tile Drainage-Shoreline Prop. Debentures	To process applications from area municipalities for the issue of debentures for the purpose of the Tile Drainage Act and the Shoreline Properties Act.	i To train the accountant to handle all aspects of this program.

Apart from the breakdown given in this example of departmental goals and defined responsibility areas, the department is broken down into different functional groupings. These include Accounting, Purchasing, Data Processing, Budgeting and Long-Term Debt. Each of these has its own goals and objectives which tie into the departmental goals and objectives.

As can be seen by this example the Finance Department in this case has a clear understanding of its role and responsibilities within the corporate structure. This type of definition was frequently found to be lacking in the case of support departments in local government.

2 Line department goals and objectives

The establishment of meaningful goals and objectives that indicate direction, identify problem areas, work overlaps, etc., is not always a simple and straightforward task. The LGMP Team found that in some cases, when departmental managers are requested to consider

their departmental goals and objectives they merely listed the activities that were ongoing or gave a vague description of responsibilities.

The following example is one such attempt by a Planning Department manager. In this case, the task of establishing objectives was seen to be unrelated to his work; it was perhaps seen as a threat, to be pushed out of the way as quickly as possible with minimum effort and commitment.

PLANNING DEPARTMENT

Primary Role

To advise the Council on matters related to the use of land and its effects.

Main Goals

- 1 To advise Council on the goals of the municipality and their revision.

- 2 To advise Council on the means of implementing the municipality's goals on a priority system.
- 3 To co-ordinate with other municipal and local departments.
- 4 To co-ordinate the advancement of the municipal community with higher levels of government.
- 5 To create public involvement in and awareness of the use of land and its effects.
- 6 To develop and encourage an awareness among all planning staff of the activities and goals of the department and offer the opportunity for input.
- 7 To improve the efficiency and effectiveness of the department.
- 7 To assist developers, builders and other persons involved in the planning and development field with improved information.
- 8 To develop communications among all the planning staff about the goals and activities of the department, in order to stimulate input, interest, and a creative working environment.
- 9 To develop an optimum level of efficiency and effectiveness for the department.

After the LGMP Project Director and the municipal Project Leader talked with the Department Manager about the function of the Department, where it fitted into the organization, what its resources were and how it could display these resources to the best advantage, the Manager decided to re-write the departmental purpose and goals and to use the process to communicate to other departments and to council regarding the role the department management felt it should play. The revised purpose and goals are as follows.

#### Revised Primary Roles

- 1 To advise Council on the management (development, conservation, protection) of the municipal resources (land, air, water, and finances) as they relate to the delivery of services and the enhancement of the quality of life.
- 2 To advise Council on the relationships and inter-relationships of social (people), economic (finances) and physical (land) matters as they relate to the municipality and its management.

#### Main Goals

- 1 To advise Council on the preparation, adoption, revision, and distribution of a statement of goals and objectives and those policies required to achieve them for the municipality.
- 2 To advise the municipal Council on means of implementing the municipality's goals through policies and objectives on a priority basis.
- 3 To provide for the advancement and improvement of the community through the co-ordination of goals and policies of other municipal and local departments and other levels of government, and to promote and provide mutual understanding and assistance in the implementation of various programs.
- 4 To link financial policies with the goals for the community.
- 5 To obtain and provide information to other departments, local governments, other government agencies, and the public to aid in the understanding, improvement, and achievement of municipal goals.
- 6 To provide information to the general public to encourage their knowledge about the use and regulation of land and their involvement in the future of the community.

As can be seen, these goals are considerably stronger than the first attempt. The first attempt produced relatively wishy-washy, non action-oriented goals, while in the second attempt the goals are far-reaching, management oriented, operational and reflect a commitment to action. Through this process the Planning Department established itself as having a strong and valuable role and a strong sense of identity and direction in the organization. Meaningful objectives could then be written which were genuinely a part of the ongoing management process rather than being something to be done and pushed aside as being irrelevant or non-operational.

#### DEVELOPMENT DIVISION — ENGINEERING DEPARTMENT

The LGMP Team was fortunate enough to have the opportunity to assist a division that had been newly formed and was having some difficulty establishing itself and devising processes to meet its responsibilities. In this case a new Development Division of an Engineering Department had been formed to consolidate the work of two divisions and to perform a number of entirely new functions. The staff for the new division were drawn from the former two divisions. Difficulties arose because the staff tended to retain their former work habits and orientation and did not incorporate the new functions. The LGMP Team spent some time with this division identifying such aspects as:

- 1 those activities that the division should be involved in;
- 2 those activities that were not being accomplished; and
- 3 the drawbacks associated with the present activities and processes, etc.

Again, a process beginning with clarification of purpose and clearly defined goals and objectives was found to be a most useful approach. During its establishment, many areas of overlap and areas where gaps existed were identified and objectives were set to overcome the problems. It was also found that a number of the departmental processes in operation were unnecessarily long and complicated.

In this case, the goals and objectives that were established helped to give the division direction and to co-ordinate the work in the department so that all functions were handled well and in the proper order. It was believed that the work of this division could be co-ordinated with the work of others and the team effort helped to establish a cohesiveness in the division. Processes and procedures were redesigned to accomplish the divisional purpose as efficiently and effectively as



possible. As a result manpower needs were better understood and the resulting analysis helped in presenting the case for more staff to council. The following represents the most recent function and goals statement for the division.

Development Division Function

To develop, evaluate and modify public works programs that will ensure the provision of public works facilities to meet community needs within the limits of available financial resources.

Goals

- 1 To identify community needs for municipal public works facilities.
- 2 To determine the availability of financial resources to provide the required public works facilities.
- 3 To develop strategies that will include priorities and funding resulting in optimization of public works facilities required.
- 4 To evaluate development proposals to determine conformance with respect to public works strategies.
- 5 To modify strategies such that the provision of public works facilities is in conformance with community needs.

- 6 To ensure staff capability of meeting the goals of the division.
- 7 To provide effective liaison with appropriate individuals and agencies.
- 8 To develop and administer guidelines and procedures for the engineering approval of the extension of local works or connection of local works to a municipal water or sewer facility.
- 9 To develop a capability to recommend the role of the municipality in waste management and resource recovery.
- 10 To initiate and co-ordinate the municipal transportation planning process so that transportation facilities are systematically tested as to present and future adequacy, and to develop a program for implementation, scheduling and financing transportation facilities within the framework of the municipal Policy Plan to meet present and future needs.

When these goals had been established, operational objectives were drawn up. The following are general and more detailed objective statements for the first four goals. The detailed objectives could be categorized as action statements, many of which concern internal work flows, processes and procedures.

Objective Statements

General Objective Statement

Detailed Objective Statement

Goal 1 To identify the community needs for municipal public works facilities.

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>1 Review established urban area boundaries (UAB).</li><li>2 Review and catalogue existing municipal public works facilities.</li><li>3 Review community servicing needs outside of urban boundaries.</li></ul> | <ul style="list-style-type: none"><li>a Determine servicing requirements in U.A.B.</li><li>b Determine deficiencies within U.A.B.</li><li>c Assign and establish priority in liaison with Planning Department for servicing within U.A.B.</li><li>d Develop a program to service U.A.B.</li><li>e Develop program to clear deficiencies in U.A.B.</li><li>f Assign personnel to above.</li><li>a Determine what should be catalogued (i.e. pipe size, slope, etc.).</li><li>b Prioritize what has to be catalogued.</li><li>c Establish a method of data processing and retrieval.</li><li>a Identification of communities outside the U.A.B.</li><li>b Evaluation of their needs.</li><li>c Determine if deficiencies exist.</li><li>d Establishment of prioritized programs in liaison with Planning Department to correct servicing deficiencies.</li><li>e Assign personnel.</li></ul> |
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General Objective Statement	Detailed Objective Statement
4 Review and catalogue historical cost sharing programs with area municipalities.	<ul style="list-style-type: none"> <li>a Identify projects.</li> <li>b Catalogue projects.</li> <li>c Evaluate whether municipality actually benefited.</li> <li>d Recommend action.</li> <li>e Formulate policy.</li> <li>f Establish system to update information and catalogue.</li> </ul>
5 Review and catalogue historical cost sharing agreement with the private sector.	<ul style="list-style-type: none"> <li>a Identify projects.</li> <li>b Catalogue projects.</li> <li>c Evaluate whether municipality actually benefited.</li> <li>d Recommend action.</li> <li>e Formulate policy.</li> <li>f Establish system to update information and catalogue.</li> </ul>
Goal 3 To develop strategies that will include priorities and funding, resulting in optimization of public works facilities required.	
1 Undertake a transportation planning review of the municipality that will provide recommendations on the provision of all transportation facilities to accommodate projected land use within the municipality.	<ul style="list-style-type: none"> <li>a To acquire land use traffic data for the model.</li> <li>b To develop computerized transportation models.</li> <li>c To estimate future transportation demands on the road network use in alternative land use concepts.</li> <li>d To establish in-house staff capabilities to re-evaluate input data as refinements in input occur.</li> </ul>
2 Develop policies that will ensure optimization of all existing transportation facilities.	<ul style="list-style-type: none"> <li>a Identify problem areas.</li> <li>b Acquire data necessary for policy formulation.</li> <li>c Review existing practices and procedures.</li> <li>d Prepare road classification policy consistent with future and present needs.</li> <li>e Prepare right-of-way widths.</li> <li>f Prepare setback and encroachment policies.</li> <li>g Update of the above policies to be done, when objective 1 (c) of Goal 3 is accomplished.</li> </ul>
3 Update transportation component of the Municipal Official Plan.	<ul style="list-style-type: none"> <li>a To be completed.</li> </ul>



General Objective Statement	Detailed Objective Statement
Goal 4 To evaluate development proposals to determine conformance with respect to public works strategies.	
1 To deal effectively with development proposals from the private sector and area municipalities and to recommend appropriate action to Engineering Committee.	<div><div>a To develop a flow chart analysis of all incoming development proposals.</div><div>b To develop a system of collecting and evaluating existing data.</div><div>c Preparation of report to Engineering Committee.</div><div>d Follow up to the appropriate agency and individual.</div></div>
2 To deal effectively with sewer and water construction proposals by the private sector and area municipalities and recommend appropriate action to the Engineering Committee.	<div><div>a Develop flow chart analysis of all incoming water and sewer construction projects.</div><div>b Develop a system of collecting and evaluating existing data.</div><div>c Preparation of report to Engineering Committee.</div><div>d Follow up to the appropriate agency and individual.</div></div>
3 Review and evaluate current Engineering Department construction programs and operating performance.	<div><div>a Purpose of this objective is to update data on servicing capabilities.</div><div>b This objective is accomplished when objectives 1, 2 and 3 of Goal 1 are attained.</div></div>

PROJECTS DIVISION — ENGINEERING DEPARTMENT

Another example of the use of goals and objectives for process oriented measures was that of the Projects Division of an Engineering Department. In this case, the output was not as efficient as the people involved thought it might be. The problem it seemed was internal to the division.

The staff of this division was composed of equal numbers of professional engineers and semi-professional engineers. The relationships between these two groups was somewhat indistinct. There was no defined role for the superiors when working on any particular job; the roles and responsibilities of professionals and semi-professionals could differ across jobs or with particular professionals. Although the staff were on friendly terms, the communication channels were not well established and exploited. As a result of the poor communication and role and responsibility confusion, mistakes and errors were made, and work was overlooked because individuals assumed that it was some other person's responsibility.

The LGMP Team held a full day organizational review with the staff, discussing reporting relationships and

providing an opportunity for conflicts and problems to be aired. It was encouraging to find that although the current process did not emphasize or require a great deal of co-ordination, the staff took great pride in their work and wanted to work together as a cohesive unit to create the best division in the Department.

As a result of this review,, the reporting relationships were modified, the workload was distributed more equitably, the communication channels were established, and the internal processes were geared to meet the needs of the staff.

In this case, therefore, the problem was defined as being an internal process problem and goals and objectives were used as a means to overcome that internal problem. Goals and objectives were not used as a planning tool or for program evaluation because all the work in this case was predetermined. Instead, goals and objectives were used to define the problems and improve the internal processes associated with work assignment.

The completed divisional goals and associated objectives were as follows. Note the large number of objectives which deal with the improvement of processes.

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| <p>1 To provide engineering, administration and construction services for public works projects to ensure conformance with accepted engineering standards, municipal policies and approved financial allocations.</p> | <p>a In-house engineering to be completed within the fiscal period and sufficiently in advance of the length of time necessary to undertake the construction. Performance would be measured on an individual basis as compared with work that would be performed in the private sector.</p> <p>b Administration of all projects by Projects Division also to be monitored on an individual project basis and performance to be evaluated on how smoothly all facets of the development of the work is progressing.</p> <p>c Actual construction to be monitored again on an individual basis and compared to:</p> <ul style="list-style-type: none"> <li>i allocation provided;</li> <li>ii number of claims which have been dealt with and amount of cost;</li> <li>iii comparison of the work to previous similar undertakings, and</li> <li>iv requested input from operating division as to the adequacy of the completed work.</li> </ul> |
| <p>2 To report on property matters, negotiate acquisition of easements and out-right purchases to accommodate public works facilities.</p>  | <p>a Property acquisition to be monitored in terms of compliance with deadlines for construction purposes and the success of mutual negotiations of property with individuals or other municipalities.</p> <p>b The adequacy of property records will be determined by their availability for reference purposes, working toward a minimum of staff time to locate information and also their ability to provide the particular information required.</p>  |
| <p>3 To provide meaningful planning input and liaison to all appropriate agencies toward the planning and development of municipal capital works.</p>   | <p>a Planning input to be provided by Projects Division on the basis of their experience in undertaking current construction projects, particularly with regard to committed capital costs and necessary carry-over into the subsequent fiscal period. Such planning input to be measured in terms of ensuring that sufficient response is given to enable successful programs within capital budgets to be easily developed, particularly as they relate to the two to three year minimum future requirements.</p>  |
| <p>4 To provide and undertake periodical review of organization for the Projects Division, that will facilitate the accomplishment of assigned tasks.</p>   | <p>a Review of division organization to be undertaken on an annual basis which will monitor the success or lack of success of achieving the work output and also compare the costs of providing this service in relation to similar agencies or to the private sector.</p>   |

Goal	Objectives	(cont'd)
5 To investigate the availability and make optimum use of funds from other agencies.	<ul style="list-style-type: none"> <li>a Continuing review of legislation and trade papers and journals to identify whether other governmental authorities are proposing new programs which may offer additional funding. This to be a continuous surveillance with periodic checks with other similar municipal organizations as to their experience.</li> <li>b Existing funding programs to be scrutinized to obtain maximum eligibility and total utilization of funds.</li> </ul>	
6 To improve co-operation, communication and co-ordination between the Projects Division and municipal departments.	<p>The improvement of co-operation and co-ordination with municipal departments to be achieved by:</p> <ul style="list-style-type: none"> <li>a securing the response of the municipal departments concerning imminent projects which allow sufficient lead time for follow-up by affected parties;</li> <li>b distribution of construction drawings and specifications; and</li> <li>c invitations to municipal departments to attend pre-construction and site meetings of construction projects.</li> </ul>	
7 To continually develop the human resources within the Division.	<p>Evaluation of performance to be on basis of reduction in complaints and general response of the municipal departments on future work.</p> <ul style="list-style-type: none"> <li>a Development of human resources to be undertaken by: <ul style="list-style-type: none"> <li>i training programs; and</li> <li>ii improvement in communications.</li> </ul> </li> <li>b Annual review of performance of staff members and individual discussion with each, to advise of both satisfactory performance and those areas requiring improvement.</li> </ul>	
8 To develop the priorities and scheduling of tender calls and preparatory work.	<ul style="list-style-type: none"> <li>a The development of priorities shall be on a continuous basis with formal documentation on perhaps a bi-monthly basis. The establishment of priorities for Projects Division work will be dependent on a large number of factors: the co-ordination of property acquisition, if required; the need to co-ordinate work with that of other agencies or to ensure co-ordination with other construction; the anticipation of the amount of lead time necessary to undertake engineering; and also the need to secure the various approvals. All of these will establish priorities. The success of the priorities so established, to be measured by the response of the user division or department, the Engineering and Utilities Committee, and the public.</li> </ul>	



Goal	Objectives	(cont'd)
8 To develop the priorities and scheduling of tender calls and preparatory work. (cont'd)	b	The scheduling of tender calls to be developed also on a continuous basis, taking into consideration the weather conditions which may affect construction work and costs, the volume of available work to contractors, the setting of tender openings to avoid conflict with similar works, and also the recognition that municipal tender calls should be separated to ensure a maximum response from local contractors.
9 To develop and periodically review standards and operating policies for all municipal servicing.	a	Review and update standard construction details and specifications on an annual basis to eliminate problems occasioned by increased costs and/or additional claims during construction.
	b	Operating policies should be reviewed on a bi-annual basis and measured on whether such policies have provided the level of service and achieved the particular purpose for which such policies were developed.

Apart from helping to develop divisional goals and objectives, each engineer and supervisor developed goals and objectives for his own operation. For instance, the Design and Construction Engineers' goals were as follows.

#### Design and Construction Engineer – Goals

- 1 To direct engineering technologists and technicians, draftsmen and surveyors in the execution of engineering and construction projects.
- 2 To liaise with consulting engineers in reviewing design, contract drawings and specifications.
- 3 To secure necessary approvals for projects from the Ministry and other authorities involved.
- 4 To prepare reports and data for submission to Committee and Council.
- 5 To review designs, proposals and reports by other authorities affecting municipal facilities.
- 6 To review and approve engineering and construction accounts.
- 7 To establish the terms of reference of each project.
- 8 To attend interim meetings with consultants to review progress.
- 9 To hire personnel, i.e. review of job applications and interviewing of candidates.
- 10 To provide effective and efficient engineering, contract administration and project cost control.

Similarly the Property Supervisor's goals were as follows.

#### Property Supervisor – Goals

- 1 To develop and update data on all municipal property, especially the municipal road network, for use in co-operation with other municipal departments.
- 2 To develop and update a land value data bank.
- 3 To provide the most effective and efficient use of staff and monetary resources available.
- 4 To undertake in-house appraisals and administer the appraising of properties for municipal projects.
- 5 To undertake in-house legal surveys and administer the legal surveying of properties for municipal projects.
- 6 To negotiate municipal property transactions with private owners as well as Federal, Provincial and area municipalities and agencies.
- 7 To establish and maintain a productive liaison with staff, the public and other governmental bodies and their agencies.
- 8 To provide efficient management and supervision of the Properties Section.
- 9 To maintain a general knowledge of the area happenings to assist public and staff inquiries.

Each individual's goals were complemented with objectives or action statements and with an identification of the measuring device. The process of establishing these was finalized throughout the division. Goals and objectives are, of course, reviewed on a regular basis.

## Some examples of process oriented goals and objectives

Throughout this paper, the importance of the analysis and improvement of managerial processes in attaining effective and efficient output has been emphasized. By setting objectives to improve processes, managers are, in effect, providing measures which should help them to improve organizational outputs and individual satisfaction.

The three preceding examples have included goals and objectives set by both line and support departments, but those examples do not specifically identify objectives which involve the improvement of management processes.

The following, on the other hand, are isolated examples of goals and/or objectives developed during the Project and designed to improve managerial effectiveness or efficiency through process improvements. The measurement being used is usually inherent in the form of the objective. A number of different departments will be represented.

### BUSINESS DEVELOPMENT DEPARTMENT

#### Goal No. 6

To undertake the management and administration of the Business Development Department in the most responsible, efficient and effective manner possible.

#### Objectives

- 1 To establish and maintain office procedures which provide for the most responsible and effective administration of allocated funds and resources. These procedures would govern such things as inventories, supplies, accounts and payment of accounts, filing systems, distribution of literature and information both internal and external, and the operation of the tourist information booths. Initial assessment to be completed by June 30, 1975.
- 2 To provide direction and supervision of staff in a manner consistent with established personnel policies, in order to obtain the maximum man/hour efficiency of each staff member. To attempt specifically to improve the efficiency of each staff member by 10% during the next year in terms of time spent processing routine work.

### PLANNING DEPARTMENT

#### Goal No. 2

To strive to develop more efficient operating procedures and improved standards and methods consistent with good planning and administrative principles, in order to implement departmental and City goals in areas of responsibility.

#### Objectives

- 1 By June 1st of each year, study and review the office record control, retrieval, and retention system, with a view toward reducing the storage space requirements of the department and improving information retrieval.

- 2 By the end of March, 1977, and in co-operation with Supplies and Services, the City Engineer and other interested departments, investigate and study the ways and means of completing a city-owned land file — including property plans, indexing and continual file up-date procedures.
- 3 By May 31st of each year, review the organization of the current planning section so that clearer areas of responsibility emerge, by:
  - i delegating more responsibility to planners, particularly in the area of their providing increased direction to their support staff, i.e. technicians and draftsmen; and
  - ii dividing the technicians' work areas, and interchanging staff to develop a full working knowledge of the various sections' responsibilities.

#### Goal No. 3

To establish good working relationships and improved communication links with support staff, contributing divisions and municipal departments, elected officials, government and public service agencies, the land development industry, and the general public at large.

#### Objectives

- 1 Improve co-operation of lateral divisions and support departments and agencies in reporting and commenting on current planning proposals; endeavour to have all comments available prior to preparing recommendations for the Planning Director, yet at the same time striving to have draft plan subdivision reports completed within 60 days of official receipt thereof, and zoning amendment application reports within 14 days of receipt.
- 2 On a continuing basis, and specifically by December 31st of each year, review the success of the goals and objectives of the previous year and in co-operation with staff members develop a new program for the ensuing year.

### CLERK'S DEPARTMENT — ADMINISTRATIVE DIVISION

#### Goal and Associated Objectives

January 1st, 1977 to March 1st, 1977

To co-ordinate and to standardize procedures in the preparation of agendas and minutes for meetings of staff, executive, general and council in order to facilitate various objectives relating to:

- a training of committee-secretary (intensive training to be completed by June 1st, 1977);
- b continuance of training of clerk-secretaries in present functions and in any new duties resulting from re-organization of department (December 1977);
- c streamlining of indexing (April, 1978);
- d development of procedural manual for section (December, 1977); and
- e develop communications with various departments respecting their needs vis-a-vis the Clerk's Department's needs (ongoing).



Goal No. 1

To maintain an optimum level of effectiveness and efficiency in the processing of all phases of re-zoning, etc., and to liaise with governmental agencies, public, other departments and staff.

Objectives

- 1 To investigate methods by which procedures can be streamlined. (January, 1978).
- 2 Review structured programs and work habits at dated intervals (6 months) with employees. Regularly assess procedures and systems to provide for a broadening of employee knowledge and efficiency.
- 3 Have employees state problems with work in report form relative to their area of responsibility, prior to review dates.
- 4 Report unresolved problems to the Department Head on sectional review date for discussion and resolution.
- 5 Assess recommended solutions and relay to staff for discussion and implementation (4 weeks after receipt of complaint).
- 6 Implement training procedures for backup staff.

PARKS AND RECREATION DEPARTMENT

Goal No. 6

To make the most effective use of financial resources.

Objectives

- 1 To have prepared by June 31, and updated yearly, a list of all sources of funds, other than from Municipal tax levies, available for Parks and Recreation purposes.
- 2 To establish a system where any new fund sources arising between yearly reviews will be made use of, if appropriate.
- 3 To review rates and fees charged on a yearly basis, and to recommend changes where appropriate. (During the month of October.)
- 4 To review the use of all facilities where additional rental revenue could be realized by the active promotion of such facilities to encourage maximum use. (By November, 1976.)
- 5 To obtain from the Finance Department the necessary information, statements, or print-outs, in a reasonable period of time, which will allow this Department to meet its commitments such as budget submission deadlines, and also to take any action throughout the year which may be indicated as necessary or desirable from the content of this information.

**Performance measurement in the municipalities involved in the project**

The following contains a brief description of LGMP experiments and progress with measurement in the four Project Municipalities.

THE REGIONAL MUNICIPALITY OF NIAGARA

The Department Head, and the division heads of the Public Works Department, clarified the functions of the Department and re-organized by grouping those functions into logical categories. These functional groupings provided guidelines for structure and for the allocation of personnel.

By clarifying the roles of the new divisions it became possible to set meaningful goals and objectives at the departmental, divisional and, eventually, lower managerial levels. The division heads worked with the Department Head as a senior staff team and brought feedback on the effectiveness of mutual processes and joint accomplishments to the forefront. Clear measureable objectives were established at each management level but the main accomplishment was the establishment of processes for mutual problem identification, reviews of progress, and the improvement of support services.

The Homes for the Aged Department needed a medium to help in the establishment of clear targets, to outline specific programs, and clarify responsibilities for the various categories of staff. The goal and objective process, combined with team problem identification and inter-group feedback and role clarification workshops helped to accomplish these aims. Clear objectives were established for each Home and each new program had definite review dates and criteria for success.

Measures generally took the form of broad criteria for program success and mutual feedback reviews. As the programs developed, client feedback measures were being established but these had not reached a state of sophistication by the end of the formal Project.

The process of goal and objective setting proved most useful as a tool for clarifying purpose and responsibility for departments such as Planning, Finance, and Social Services. The Planning Department defined a greatly expanded role for itself and then needed to establish a structure which would enable the managers to fulfill that role. Criteria were established to indicate whether or not the role was being fulfilled. This initiative by the Planning Department plus a physical planning initiative by the Public Works Department, resulted in some interdepartmental conflict but the resolution of that conflict proved to be healthy since it brought many problems to the forefront and a process of problem resolution was established.

The conflict resolution process, plus the perceived need to improve certain support services, presented some challenges to the Committee of Department Heads and helped to open communication at the top administrative levels. While the Committee of Department Heads did not set objectives as a unit, the requirements of individual departments to interact with other departments acted as a force to improve co-ordination and communication.

As a result, processes of management were improved and departments outlined specific targets. Measures largely took the form of indicators of objective accomplishment and were largely concerned with getting the job done economically with, unfortunately, little emphasis upon client feedback.



One major department identified severe internal conflicts, a lack of trust, and an evident confusion regarding its role. It would have been inappropriate to superimpose an output measurement system upon this department. Output measurement and associated control processes had been attempted in the past but were regarded with suspicion and consequently abused. Individuals tended to manipulate the performance measurement data for their own internal political reasons, as they frequently will under an imposed measurement system. Thus processes of conflict resolution were emphasized and the desirability of more open communication stressed.

#### OTTAWA

In Ottawa, the principal beneficiaries of the goal and objective system were the Physical Environment and Finance Departments. With strong internal leadership the Physical Environment Department managers were able to set meaningful goals and objectives throughout the entire department. Having established goals and objectives at all levels, the measurement aspect involved team reviews at each management level to keep the objectives up to date. Monthly meetings were scheduled for management teams<sup>30</sup> at each level to discuss mutual problems and to modify objectives and behaviour where necessary.

The goal and objective setting process and monthly meetings did much to clarify responsibility and to promote communication and co-ordination throughout the department. The result was a departmental closeness and cohesiveness that had not previously existed. Many of the department objectives involved an emphasis upon service while others emphasized process improvement. Measurement was largely concerned with determining the degree to which objectives had been accomplished and it was thus a part of the total management process.

With little LGMP help, the Finance Department went ahead to set objectives for internal programs. Since Finance was primarily responsible for the establishment of the budget process, the financial information system and central purchasing, the department was very interested in developing effective processes for management in those areas. Ottawa lacked the necessary degree of co-ordination between departments to establish joint objectives in support service areas. Without that co-ordination, the Finance Department was virtually helpless to proceed with management improvement in financial areas which affected all departments. In fact, Finance initiatives were looked upon with suspicion by other departments and thus Finance was limited in the degree to which the Department could introduce systematic approaches to management.

#### ST. CATHARINES

The emphasis in St. Catharines was upon the development of effective teamwork at the top administrative level. The senior management team was a forum where issues involving several departments could be discussed and from which a corporate advisory to Council could emanate. There were two ways in which the effectiveness of the senior management team was measured.

- 1 The members of the team were asked at intervals, to indicate how effectively they thought the team was performing its function. In this way, subjective evaluations were obtained, although at first managers found it difficult to evaluate the team because its role had not been clarified.
- 2 Goals and objectives were established for the team in areas where it seemed to be carrying out an on-going management process. The objectives specified particular targets which seemed to have consensual importance.

In most departments, measurement took the form of indicators of objective accomplishments similar to those described earlier for the region of Niagara. As departmental goals and objectives became firm, department heads recognized a number of areas where firm council policy was required. The senior management team consolidated these 'issue' areas and met with Council to discuss them. After the first very successful council – administrative problem-solving workshop, such workshops were adopted on a routine basis. Each workshop was evaluated by subjective participant input to a questionnaire.

#### LONDON

In London, the definition of responsibilities, the identification of work overlaps and the improvement of co-ordination and co-operation were emphasized, because these were clearly identifiable weaknesses at the outset. It would have been almost impossible for support departments and divisions, in particular, to set meaningful goals and objectives without clarification in these areas. In some cases, it was necessary to establish communication channels, e.g. management team meetings, and to ensure that these channels were operating freely, before meaningful, management related goals and objectives could be set.

Two departments in London, Police and Finance, were very much influenced by the goal and objective concepts but chose not to become involved in an integrated system with other departments. Instead, they established goal and objective systems geared directly to their own needs. Each of the two largest departments, Community Services (Planning Division particularly) and Engineering, spent considerable time writing, critiquing and co-ordinating goals and objectives.

In all four of these municipalities the LGMP was particularly involved with process oriented and fiscal measures, far more so than with output or program measures. This involvement emerged because the philosophy of the LGMP embodied the development of systems whereby managers could develop their own measurement activity according to their own criteria and needs. The LGMP was not a vehicle to provide managers with measures, rather they were encouraged to develop measures, through the initial establishment of goals and objectives.

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30 A management team includes each manager plus his immediate subordinates.

In all, approximately two-thirds of the managers in the four municipalities, who came into contact with the LGMP, adopted a goal and objectives system of management, and the measurement systems were largely tied to the accomplishment of objectives. Those who did not develop systematic goals and objectives tended

to be support service managers, e.g. legal departments, which either did not see the need to be involved in an integrated system or had difficulty setting objectives without prior involvement in the process by all other departments.

## Appendix II Performance Measurement: A Selected Annotated Bibliography

The bibliography is divided into two sections. The first lists papers, documents and articles, which relate directly to performance measurement programs that are being carried out in municipalities. These are arranged in alphabetical order. Most of the items in this section have been received in correspondence with the municipalities and are not generally available. The second section contains more general articles and papers about performance measurement in municipalities. These are more readily available from publishers. This section is not intended to represent an exhaustive survey of the literature on productivity measurement. It represents those publications that the LGMP Team found to be most useful in a study of this area. The emphasis is on the practical side with most of the more theoretical publications and documents having been omitted.

Any questions about how to obtain any of the documents listed may be addressed to the authors at the School of Business, Queen's University.

### PERFORMANCE MEASUREMENT PROGRAMS

#### BURNABY, BRITISH COLUMBIA

Hay Associates, *Accountability Management*, Prepared for the Municipality of Burnaby, by Hay Associates Canada Ltd., Vancouver, Canada, March, 1974.

Manual prepared to guide the municipality in introducing a performance appraisal program. The program is based on setting personal goals, identifying accountability spheres and measuring performance against accountabilities.

#### CHARLOTTE, NORTH CAROLINA

Malizia, Emil E., and Melvin, Robert L., *Working Paper #3*, Charlotte IMIS Project, Charlotte, 1971.

A paper outlining the efforts in constructing performance indicators as part of the attempt to construct an information system for the city. These are essentially effectiveness and efficiency indicators or potential demand indicators useful for management planning.

*Objectives: Fiscal Year 1974 Program Budget*, Charlotte, 1973.

Productivity measures are used in many areas. These are primarily input/output measures. For each division of a major program, goals are defined, objectives and resources required to meet objectives are then outlined.

#### CINCINNATI, OHIO

Koch, Vernon E., 'Cincinnati's Budget Developments', *Public Administration Review*, Spring, 1960, pp. 74-85.

Report describes the experiences of the municipality with performance budgeting. The author provides a good critique of the problems in using performance budgeting.

#### DISTRICT OF COLUMBIA

*Improving Program Performance*, (A report on the development of a performance monitoring system for the District of Columbia Government), March, 1975.

This publication describes work that has already been done and future actions that are planned for the District of Columbia's Performance Monitoring System (PMS). Elements of PMS are described and examples are given of how the District improved service performance.

*Guidelines for Developing a Performance Monitoring System in the District of Columbia Government*, Office of Budget and Financial Management, Washington, D.C., April, 1973.

A description of a performance monitoring system implemented in D.C., as a basic resource management concept, providing an information base for decision-making to improve the delivery of services. Strongly connected with accounting (as management control). 'Similar methods for similar purposes' complete the resource management cycle. This paper discusses three key elements; performance criteria, planned performance targets and performance reports. It outlines the scope and content of the program. Various measures are classified and development strategies and schedules are summarized.

*Managing Urban Resources, A Report on the Mayor's Executive Seminar on Policy Formulation and Resource Management*, Government of the District of Columbia, November, 1972.

A collection of addresses and discussion of a seminar held in Washington on productivity. Hayes and Hamilton from New York spoke on 'The Process of Policy Formulation and Resource Management' and 'Productivity in the Public Sector' respectively. Graeme Taylor also spoke on 'Analysis and Evaluation in Management Decisions'.

#### FAIRFAX COUNTY, VIRGINIA

Office of Research and Statistics, *Monthly Report to the County Executive: Measuring the Effectiveness of the Fairfax County Government*, Fairfax County, September, 1973.

Includes management indicators for each department, and compares them to preceding months and years.



Also shows measures of effectiveness in graph form, and measures of effectiveness for some programs.

Finz, S.A., 'Productivity Analysis: Its Use in a Local Government', *Government Finance*, November, 1973, pp. 29-33.

By the Director of the Office of Research and Statistics of Fairfax County, Virginia. He speaks generally of the use of productivity measurement for local government, referring to the Fairfax experience for examples. He highlights the need for a system of measures of effectiveness which in turn requires a set of goals and objectives for each agency. Discusses the kinds of objectives for each agency and the kinds of objectives for different departments. Relates goals, objectives and indicators to PPB.

#### FORT WORTH, TEXAS

*Fort Worth Annual Budget and Program Objectives, 1974-75 Fiscal Year*, Fort Worth, 1974.

A budget which attempts to set goals and measure the effectiveness of programs. An attempt at trying to quantify effectiveness where possible.

*Fort Worth Public Works Productivity Improvement Projects*, December, 1969.

Letter and report describing the activities undertaken in the city's program management program. A brief outline is given of four productivity improvement projects. These projects, in the Public Works Department, include; four day task incentive work week, one way disposable containers, utilization of larger collection vehicles and a street cleanliness rating system.

#### STATE OF GEORGIA

*State of Georgia Office of Planning and Budget: General Budget Preparation Procedures, 1978 Fiscal Year*, State of Georgia, June, 1976.

Publication instructs staff of the Office of Planning and Budget how to prepare their budgets. Illustrates the extent to which zero based budgeting is being used in the State of Georgia.

Minmier, George S., and Hermanson, Robert H., 'A Look at Zero-Base Budgeting - The Georgia Experience'. *Atlanta Economic Review*, July/August, 1976, pp. 5-12.

Article analyzes the experiences of The State of Georgia with zero based budgeting. Author uses questionnaire to determine if the concept had any positive or negative affect.

#### GREENWICH, LONDON, ENGLAND

*Community Plan and Program Budget, 1973-1974 to 1976-1977*, Greenwich, 1973.

Indicates activities in each of seven program areas, for the four years 1973-1977. Input is shown in terms of financial resources, output in terms of results which show the effectiveness of each program. Gives examples of output measurement and quantified objectives.

#### KANSAS CITY, MISSOURI

*Industrial Engineering Program: Administrative Regulation 1-11*, Kansas City, August, 1973.

An administrative regulation describing a new program designed to measure and improve the productivity of selected programs and departments of the city. Includes documentation of a pilot project done with Streets Maintenance.

Urie, J.M., 'Increasing Productivity: A Goal of Kansas City,' *Government Finance*, November, 1973.

This article focuses on Kansas City's use of industrial engineering techniques to establish work standards in an attempt to improve overall performance in the delivery of service. An example of the program's use in the Finance Department is provided.

#### CITY OF LAKEWOOD, COLORADO

*Program Performance Budget 1977, Proposed*, Office of Budget and Research, Lakewood, Colorado.

Comprehensive, detailed budget based on programs. For each program, objectives are set and measurement criteria identified.

Henderson, Bill and Young, Randy, *Program Performance Budgeting: An Effective Public Management System for Evaluating Municipal Services*, Special Bulletin, Municipal Finance Officers Association, February 25, 1976.

The authors contend that the management system developed by Lakewood, Colorado, meets the public demand for more effective planning and evaluation of programs. Aspects of this system are as follows, program planning and evaluation, performance accountability, total resource allocation and financial management reporting and control. A description of the development of this management system is provided.

#### LITTLE ROCK, ARKANSAS

Buntin, D.P., *Standard Workday Study for Residential Refuse Collection*.

Utilizing the concepts of route completion incentives, route balancing, route optimizing, and standard workday routines, the City of Little Rock was able to affect a 21% increase in the productivity of its refuse collection system. This publication describes in detail the experimental design, data collection, data analysis, implementation and follow-up components of the study.

Lubin, R., *The Little Rock Custodial Make-Buy Study: A Transferable Technology*.

This paper deals with the development of a study to determine whether Little Rock should continue to provide custodial services with its own staff, or whether it should contract these services. A clear description of the study methodology is presented and suggestions are made as to the general applicability of this methodology to other cities concerned about their custodial services.

#### LONDON, ONTARIO

*Administration of Engineering Work and Construction Projects*, London, 1973.

A summary of results of collaboration with consultants to improve the effectiveness of engineering and construction administration. Schedules, activity reporting, standard cost and performance evaluation are discussed with recommendations. Sample forms, tables and charts are included.

#### LOS ANGELES, CALIFORNIA

Eghetdari, Ali and Sherwood, Frank, 'Performance Budgeting, Has the Theory Worked? Performance Budgeting in Los Angeles', *Public Administration Review*, Spring, 1960, pp. 63-69.

Article describes the advantages and disadvantages of performance budgeting as a means of converting the line budget in the municipality of Los Angeles.

Hirsch, Werner A., Sonenblum, Sidney and Teeple, Ronald K., *Local Government Program Budgeting: Theory and Practice, With Special Reference to Los Angeles*. Praeger Publishers, New York, 1974.

This concise book examines, reviews, and summarizes the most significant conceptual and applied issues of local government program budgeting. The authors discuss the experiences of large and small local governments in organizing the program budgeting effort, designing program budget structures and conducting program analysis. Criteria for trade-off analyses, the interpretation and measurement of costs and benefits, and budget structures, are evaluated. Specific program analyses, including benefit-cost, cost-effectiveness, production function, inter-governmental and multi-year analyses, and program structures for police, education, recreation, health and welfare services are described and evaluated.

#### McMASTER UNIVERSITY, HAMILTON, ONTARIO

Letters, memo and procedure manual on McMaster University's experiences with zero base budgeting to June, 1977.

MacFarlane, John A., 'Zero Based Budgeting in Action', *CA Magazine*, December, 1976, pp. 27-31.

The author presents the successful experiences of McMaster University with the concepts of zero based budgeting.

#### NASHVILLE, TENNESSEE

*Programs for the 70's: Proposed Operating Budget 1973-1974*, Nashville, 1973.

A program budget which states general goals and more specific program objectives. Where possible, performance/productivity measures have been included. In some areas the output measures give a good indication of efficiency.

Burt, Marvin R. and Blar, Louis H., *Options for Improving the Care of Neglected and Despondent Children*, The Urban Institute, Washington, D.C., March, 1971.

A study aimed at developing and demonstrating improved methods by which local governments can analyze their programs and policies. An analysis of the child care system of Nashville is undertaken. This is directed at the overall system, identifying public objectives for the system and selecting specific evaluation criteria by which the objectives might be measured. Alternative programs are identified and examined in terms of costs and effectiveness.

#### NASSAU COUNTY

*An Approach to Productivity Improvement in the Public Sector: A Procedural Manual*, Multi-Municipal Productivity Project of Nassau County, Town of Hemp-

stead, Town of North Hempstead, Town of Oyster Bay, The Civil Service Employees Association, July, 1975.

This manual reports on a project which was funded by the U.S. Department of Labour and the National Commission on Productivity and Work Quality. The approach taken is through systems analysis rather than by evaluation of individual performance. A step-by-step procedure for conducting a productivity improvement effort is presented. This procedure concentrates on the aspect of organizational change.

#### NEW YORK, NEW YORK

Hamilton, Edward K., 'Productivity: The New York City Approach', *Public Administration Review*, November-December, 1972.

A description of the NYC Productivity Program including a discussion of the problems of increasing local government productivity. It examines why the program was started and where it was at the time of writing. Also includes examples of how the program has decreased unit costs and improved the use of resources in a number of areas.

Hayes, Frederick O.R., *Creative Budgeting in New York City, An Interview with former Budget Director Hayes*, Urban Institute, June, 1971.

An interview in question/answer format which covers the New York experience with implementing PPB. Outlines approach taken, and describes project monitoring and information systems.

*Productivity Program, August 7, 1972*, New York, 1972.

A report for each city department outlining accomplishments for fiscal year 1971-1972, giving a summary in measureable terms of objectives for FY 1972-1973, followed by actual objectives. Also provides information on programs, units of measure, current and proposed levels of productivity.

*Productivity Program, Annual Summary, Fiscal Year 1972-1973*, New York, 1973.

A summary of year one of the project with historical data for comparison where possible and appropriate. Also provides a summary of the productivity of each department.

*Productivity Program, Fiscal Year, 1973-74*, New York, 1973.

A report of the second year of operation in the productivity program. Introduction discusses problems of continuity. Again, summaries of productivity of each department are provided.

*Productivity Program, Fourth Quarter Progress Reports*, New York, July, 1973.

Last of the quarterly reports tabulating month by month results for each performance target. These reports are the basis of the annual reports. Outlines noteworthy achievements, problem areas and departmental details.

#### ORANGE, CALIFORNIA

*Productivity Standards Development*, February 24,



1975, to June 1, 1976, California I.P.A. Project, 74-40.

Report outlines the municipality's attempt at reducing the cost pressures facing them, by improving productivity. Aspects of the program included the development of productivity measurement standards for all city functions.

*Objectives and Effectiveness Factors for Budget Structures*, County Administrative Office, Orange County, California, June 30, 1972.

A book which presents both the philosophy and methodology of setting goals and objectives within a budgeting framework, as well as developing effectiveness measures. Examples are drawn from the program of Orange County, and recommendations are offered. Five appendices include a glossary of 22 terms, types of measures and means of evaluating them, potential output and effectiveness measures, an examination of department interfaces and a very brief bibliography.

#### PALO ALTO, CALIFORNIA

Barbour, George, *Plan for the Development of a Service Management System for the City of Palo Alto, California*, Palo Alto, 1973.

An outline of the steps required to implement an improved service management system. A large part of this process consists of the development and implementation of measures of performance. Efficiency and effectiveness measures are emphasised.

Barbour, George, *Development of Performance Measures*, Palo Alto, October, 1973.

Instructions for the development of departmental measures of performance. The three main types of measures covered and explained are workload measures, efficiency measures, and effectiveness measures.

Barbour, George, *Revision of Program Statements: Why? How?*, Palo Alto, October, 1973.

Instructions to practitioners on revising program statements, with particular emphasis on expressing the statements in terms of objectives with specific measurement criteria identified for each.

#### PHOENIX, ARIZONA

*Proposed 1976-1977 Annual Budget*, City of Phoenix, Arizona, submitted by the City Manager, May 14, 1976.

*Planning-Programming-Budgeting-System: An Evaluation for the City of Phoenix*. An internal report from Phoenix Budget and Research Director C. Hill to City Manager John Wentz, June 30, 1971.

#### SAN DIEGO, CALIFORNIA

*Final Report, PPBS - HUD Project*, Department of the Budget, San Diego, July, 1971.

A brief summary of the major findings from PPB efforts in San Diego to July, 1971. Analyzes how PPB must fit in with municipal government, and outlines the need for goals and objectives, measures of effectiveness and information systems.

*City of San Diego Program Budgeting - The PPBS Task Force*, Comprehensive Management Planning Prog-

ram, Financial Management Department, San Diego, California, December, 1976.

The attempt of a special PPB task force to assist in the development and refinement of the city's program budget is covered in this report. The report elaborates on task force efforts to: improve the delineation and structure of programs contributing to departmental objectives; develop specific and quantifiable statements of intended results of programs; develop more meaningful measurements of program products or results.

#### ST. PETERSBURG, FLORIDA

Anderson, B., 'A Ninety Degree Turn', *Government Finance*, November, 1973.

An essay stressing the need for an effective computerized financial information system for local government. Describes the new system in St. Petersburg which has the characteristics of a successful information system.

Jreisat, Jamil, *Measuring Output of Urban Programs and the Effects of Measurement on Administrative Change: The Case of St. Petersburg*. (Prepared for delivery at the Annual Meeting of the American Society for Public Administration, Chicago, April 2, 1975.) University of South Florida, Tampa, Florida, 1975.

Examines from an outsider's viewpoint the new system of productivity measurement implemented in the city government of St. Petersburg, and describes some of its major characteristics. The author's study assessed administrative adaptability and change instigated or affected by information derived through measurement of output. It also determines the quality of output produced by various programs subjected to measurement, particularly a) the degree of satisfaction of the clientele receiving the output, and b) the degree of satisfaction of staff in the various operations of the city. Some useful observations are made in the final section concerning difficulties with measures, their use, and the system in general.

*City-wide Effectiveness/Productivity Measurement System Project for St. Petersburg*, The Urban Institute, Washington, D.C., 1974.

Describes a joint project being carried out in St. Petersburg and Nashville, giving the background of the Project and the major characteristics of the effort to develop 'citizen impact' measures of effectiveness and efficiency of local government services.

Barbour, George P., 'Productivity Measurement: The ICMA Viewpoint', *Government Finance*, November, 1973.

A brief history of the ICMA's involvement with productivity and an outline of the St. Petersburg-Nashville Davidson productivity measurement project.

#### SUNNYVALE, CALIFORNIA

*Joint Financial Management Improvement Program: Annual Report to the President and Congress. Productivity Programs in the Federal Government FY 1974. Volume Two: Case Studies*.

Describes the evolution of a management information



system for Sunnyvale, California. The link between the MIS and program budgeting is illustrated. The report discusses the techniques identified by Sunnyvale as being primarily responsible for the successful implementation of the program.

WESTINGHOUSE, CANADA LTD.

Manual and report on the introduction of zero based budgeting in Westinghouse Canada Limited. Report describes the experiences learned, and the process utilized. Relevant examples of zero based budgets are included.

WILMINGTON, DELAWARE

Smith, Bruce A., and Goldlust, Perry F., *Wilmington Productivity Management Program - A Study of Solid Waste Collection Practices*, Wilmington, Delaware, November, 1975.

Report outlines how the municipality was able to make significant cost savings in its solid waste collection operation. The method used to achieve cost reduction/productivity improvement was the reduction of crew sizes from five to three.

WISCONSIN

Lucey, Patrick J., 'Wisconsin's Productivity Program', *Public Administration Review*, November-December, 1972.

An account of a program instituted in 1972, with the goal of increasing productivity. The program was implemented from the top down. This article describes the difficulties of implementation and operation, and of communicating the basic elements of a productivity program.

*Productivity in Brief*, Wisconsin Department of Administration, September, 1973.

A description of the background, development and results of the Productivity Improvement Plan. Appendices show productivity charts of certain agencies and answer questions on productivity in general.

*1973-1975 State Budget Tax Relief and Policy Reform*, State of Wisconsin, August, 1973.

An innovative budget to be used as the major policy instrument for Wisconsin, incorporating the Governor's Productivity Program.

## PERFORMANCE MEASUREMENT IN GOVERNMENT

### General publications

- 1 Anthony, R., 'Closing the Loop Between Planning and Performance,' *Public Administration Review*, Vol. 14, May, 1971, pp. 388-398.

Highlights the importance of the accounting function and estimates of operating costs. Succinctly covered are such areas as investment costs versus operating costs, measuring expenses, variable and non-variable costs, program elements and responsibility centres.

- 2 Bauer, Raymond A. (ed.), *Social Indicators*, The MIT Press, Cambridge, 1966.

This book focuses on social indicators used in American society. Social indicators are defined as measures that enable us to assess where we stand and are going with respect to our values and goals, and to evaluate specific programs and determine their impact. A useful introduction to the subject.

- 3 Beatty, Donald W. (ed.), 'Measuring Government Effectiveness', *Government Finance*, November, 1973, (entire issue devoted to this topic).
  - a 'Increasing Productivity: A Goal of Kansas City', by John Urie;
  - b 'Applications of Productivity Measurement in Local Government', by Harry P. Hatry;
  - c 'Productivity Measurement: the ICMA View-point', by George P. Barbour Jr.;
  - d 'A Ninety Degree Turn', by Bond Anderson III;
  - e 'Efficiency and Effectiveness in State and Local Government', by Kenneth S. Calwell;
  - f 'Productivity Analysis: Its Use in Local Government', by Samuel A. Finz;
  - g 'Commentary', by John V. Lindsay and Gov. Patrick J. Lucey.

- 4 Berkshire, Tom, 'Developing a System of Measurement in a Metropolitan Authority - Early Experiences of the Greater London Council', *Local Government Studies*, February, 1974, pp. 39-52.

As part of its plan to employ a corporate management system, the GLC has been developing a system which measures the activities of the Council, in order that decision-making can be improved through the systematic use of the quantitative information generated. This article discusses the evolution, examples of measures used, and some of the problems yet to be overcome.

- 5 Boots, A., Dawson, G., Silverman, W., Hatry, H.P., *Inequality in Local Government Services: A Case Study of Neighbourhood Roads*, The Urban Institute, Washington, D.C., 1972.

A method for obtaining data on the provision of local government services, applied in case study of roads in Fairfax County, Va. Discusses services measurement, data analysis and variables, etc. Provides tables.

- 6 Brummett, Lee, 'Total Performance Measurement', *Management Accounting*, November, 1973, pp. 11-15.

An article calling for a conceptual broadening of the role of accounting into performance measurement in the public sector. 'Total performance' assessment is defined as a function of net income, human resource contribution, product or service contribution, and environmental contribution. Details for each category are suggested and forms of reckoning outlined. Performance is then related to quality of life and a potential role for accountants suggested.

- 7 Budmen, Bernard, 'New Approaches to Governmental Delivery Services', in Budmen, Bernard and

Adams, Harold, *Organization Development: Improving Government's Delivery Systems*, 8th Conference, University of Connecticut, Albany, N.Y., November, 1971.

Discusses the problems of performance measurement in local government, and offers solutions in the form of advice on how to go about the process. Three catch-phrases summarize the advice: think small, think early and find out what other people are doing.

- 8 Butt, R.B., 'A Feasibility Study of PPBS in Gloucestershire', *Local Government Studies*, April, 1972, pp. 37-52.

This is an account of a feasibility study of PPB, its organization, sequence of steps and results. Describes the organization and management system of the County Council before implementation and concludes with a description of anticipated changes as a result of the decision to adopt PPB.

- 9 Byron, R.J., 'Reviewing a Program Budgeting System in a Municipality', *Journal of Systems Management*, Vol. 22, April, 1971, pp. 33-39.

This article details the efforts of Anaheim, California, in introducing program budgeting. Emphasis is placed on reviewing the program budget in terms of costs and effectiveness.

- 10 Caldwell, K.S., 'Efficiency and Effectiveness Measurement in State and Local Government', *Government Finance*, November, 1973.

A clearly presented case for measures of efficiency and effectiveness in government, stressing the most important 'do's and don'ts', the need for quantification, the role of performance budgeting and need for user's viewpoint. Provides concrete examples of program areas, goals, objectives, measures, and limitations imposed by local resources.

- 11 Campbell, D.S., 'Planning, Programming and Budgeting in the Ontario Government', *Cost and Management*, July-August, 1975, pp. 6-12.

A primer on PPB and the extent of its operation in the Ontario Government. Describes the Ontario experience in terms of six key elements in the PPB process. These elements include:

- a analyzing tomorrow's environment;
- b setting specific statements of desired future results;
- c determining the best strategy for meeting objectives;
- d defining financial and personnel resources to implement the strategy;
- e determining if objectives have been met; and
- f linking all elements in a comprehensive consistent system.

Finally, the author makes some brief recommendations as to how Ontario's PPB system could be improved.

- 12 Carter, Novia and Wharf, Brian, *Evaluating Social Development Programs*, Canadian Council on Social Development, Ottawa, Ontario, 1973.

This publication addresses itself to the need for evaluation research on social programs as a means for helping decision-makers to design better programming in the future. The authors review the literature on evaluation, pointing out problem areas. They develop a 'framework for practice', which is designed to be used as an evaluation plan.

- 13 Committee on Government Productivity, *Committee on Government Productivity Report #10*, Ontario.

A report of the committee on government productivity appointed to recommend ways of improving efficiency. Summarizes both the recommendations presented in earlier reports, and the methods and results of the inquiry. Also discusses possible valuable areas for study in the future, and a program to monitor and evaluate the benefits resulting from implementation of committee suggestions.

- 14 Council on Municipal Performance, 'Coterminality', *COMP News*, November 29, 1976.

This issue is devoted to 'coterminality' — a remedy that ensures that city agencies' service areas coincide. The problems with making municipal governments more responsive to citizen complaints are discussed. Twelve issues of COMP News are published annually. These issues provide objective information regarding municipal performance and present new developments in municipal evaluation.

- 15 Council on Municipal Performance, *Municipal Performance Report*, published bi-monthly.

This is one of the vehicles of COMP in its efforts to 'disseminate unbiased and detailed information on the comparative performance of United States cities in areas such as criminal justice, economic policies, environmental protection, financial management, health, housing, taxation and transportation.'

- 16 Cutt, James, 'Efficiency and Effectiveness in Public Sector Spending: The Program Budgeting Approach', *Public Administration Review*, Vol. 13, 1970.

A theoretical article which exposes some difficulties in using PPB for evaluation in local government. The basic contention is that PPB, as originally developed, is an extremely complex process and is far too complex in most cases to be used for meaningful evaluation or planning in municipalities.

- 17 Dittenhoffer, Mortimer A., 'Performance Auditing Simplified', *Public Administration Review*, March-April, 1971.

An introduction to and definition of performance auditing, how it relates to financial auditing and its future.



- 18 Eghetadari, Ali and Sherwood, Frank, 'Performance Budgeting, Has the Theory Worked? Performance Budgeting in Los Angeles,' *Public Administration Review*, Spring, 1960, pp. 73-69.  
Article describes the advantages and disadvantages of performance budgeting as a means of converting the line budget in the municipality of Los Angeles.
- 19 Fry, Carroll J., 'A Practical Approach to Performance-Program Budgeting for a Small City: MFOA Special Bulletin 1971 G,' (based on a paper presented at the 65th Annual Conference, June, 1971) November 1, 1971.  
A brief paper which begins by outlining the function of the budget and the steps in the budgetary process. Different approaches to budgeting are identified. The experiences of Winona (of which the author was city manager) with performance program budgeting are then described. Important considerations are pointed out, and some cautionary remarks made.
- 20 Ghorpade, J., *Framework for the Measurement of Programmatic Effectiveness*, The Urban Observatory of San Diego, San Diego, California, April, 1971.  
Develops a process for analyzing the effectiveness of community action projects using the following sequence:
  - a general description of broad goals;
  - b identification of project beneficiaries;
  - c selection of effectiveness criteria;
  - d identification of data needs;
  - e identification of data sources;
  - f evaluation or measurement of effectiveness; and
  - g evaluation of feedback and restructuring.Sample applications of the conceptual scheme in six U.S. municipalities are provided.
- 21 Gottlieb, J., *Productivity in Police Work*, Draft Summary, National Productivity Commission, June 12, 1973.  
After explaining why current performance indicators are inadequate, Gottlieb suggests new improved measures concerning apprehension of offenders, crime deterrence and provision of non-crime services. Suggestions are made for improvement of patrol productivity, human resource productivity and prevention productivity.
- 22 Grant, Mary Margaret (ed.), 'Local Government Productivity', *Public Management*, Vol. 56, No. 6, June, 1974 (entire issue devoted to this topic).
  - a 'Productivity Improvement: The Route to More Effective Public Management', by George H. Kuper;
  - b 'Issues in Local Government Productivity Measurement', by Donald M. Fisk;
  - c 'Local Productivity Programs: An Overview', by Donald J. Borut and Steve Carter;
  - d 'Implementation of Productivity Analysis in the County', by Robert W. Wilson and Samuel A. Finz;
  - e 'Charlotte-Management by Objectives', by David A. Burkhalter and Jerry B. Coffman;
  - f 'Barrington Measures Productivity', by Dean H. Maiben;
  - g 'Dubuque - Fiscal Information System', by Gilbert D. Chayenelle;
  - h 'St. Petersburg - Productivity Measurement', by Paul V. Yingst and James L. Cavanaugh;
  - i 'Nashville-Davidson County - Productivity Management', by Thomas W. Finnie and John L. Pazou;
  - j 'San Diego County - Productivity and Evaluation', by Frank Aleshire.
- 23 Gross, Bertram J., 'The New Systems Budgeting', *Public Administration Review*, March-April, 1969, pp. 113-137.  
Gross describes and explains the system of planning programming budgeting, giving a history of its development and discusses the potential for its continued use.
- 24 Guthrie, Thomas L., *Productivity Management of City Parks Maintenance*, Study supported financially by the Intergovernmental Personnel Act, Indiana Statewide Plan, undated.  
Preliminary report on a productivity program at the municipal level of parks maintenance. Study was limited to determining measurement criteria of park maintenance functions which would provide a basis for objective evaluation, thereby giving insight as to how productivity may be improved.
- 25 Hartle, D.C., 'A Proposed System of Program and Policy Evaluation', *Canadian Public Administration*, Vol. 16, No. 1, 1973, pp. 243-66.  
This article outlines a framework for integrating policy and program evaluation, strategic planning and priority problem identification. The author lists three tasks to perform to accomplish this objective:
  - a identify goals and goal areas;
  - b specify indicators for measuring progress towards goals; and
  - c identify policy instruments which affect progress toward goals.
- 26 Hatry, Harry P., 'Applications of Productivity Measurement in Local Government', *Government Finance*, November, 1973.  
Written by a recognized authority on productivity in local government, this article addresses itself to the meaning of productivity and discusses four key areas of productivity improvement; cost reduction; managerial control; program and policy formulation; and development of employee incentives.
- 27 Hatry, Harry P., 'Status of PPB in Local and State Governments in the United States', *Policy Sciences*



2, American Elsevier Publishing Company Inc., Washington, D.C., 1971, pp. 178-189.

An introduction to and brief history of PPB are followed by an outline of the developments in goal and objective setting, program budgets, multi-year projections, measures of output, program/policy analysis, program evaluation and various other aspects of PPB systems. Another section summarizes some of the major barriers to the effective use of PPB by local and state governments.

- 28 Hatry, Harry P., 'Issues in Productivity Measurement for Local Government', *Public Administration Review*, Vol. 32, No. 6, December, 1972, pp. 776-784.

Points out the benefits of measuring the productivity of local government agencies but also discusses some of the problems involved. The author shows how seemingly valid measures may actually be misleading or even meaningless, and provides some pointers as to how to avoid these pitfalls. Contains examples of effectiveness measures for local government services.

- 29 Institute of Municipal Treasurers and Accountants, *Program Budgeting Implementation - Some Practical Problems*, Papers from 1971 seminar, Institute of Municipal Treasurers and Accountants, London, England, June, 1971.

- a 'The American Experience', by I.C. Hancock;
- b 'Creating the Right Environment', by H.L. Oliver;
- c 'Objective Setting', by R.B. Butt;
- d 'Forward Planning', by J.B. Woodham;
- e 'Multi-Purpose Budgeting', by G.D. Nicholson;
- f 'The Self-Evaluating Organization', by A. Wildavsky;
- g 'Information Systems', by J.K. Hender;
- h 'Output Measurement', by J.V. Miller;
- i 'Viewpoint', by A. Williams.

- 30 International Labour Office, *Measuring Labour Productivity*, New Series, No. 75, Geneva 1969.

Discusses methodology, problems of measurement, various measures, principals governing choice of measures, international comparison of levels of productivity, etc. Appendices include bibliographical references.

- 31 Labour-Management Relations Service, *Negotiating for Productivity in Sanitation*, Washington, D.C., Fall, 1972.

This short paper examines unionization in municipal sanitation operations and the effects of unions upon productivity. Areas covered are: measurement of basic productivity data; conditions favourable for productivity improvement; and management right to sub-contract. The study concludes with a number of recommendations for municipal sanitation departments.

- 32 Lee, R.D. Jr., and Johnson, Ronald W., *Public*

*Budgeting Systems*, University Park Press, Baltimore, 1973.

A basic text containing a comprehensive systematic presentation of all aspects of budgeting at federal, state and local levels. Includes good coverage of such topics as PPB, program planning and evaluation, information systems and intergovernmental relations.

- 33 Maanen, John Van, *The Process of Program Evaluation*, National Training and Development Service Press, Washington, D.C., 1973.

Intended as a guide for managers in all types of organizations to evaluate programs. The author outlines several techniques for conducting a program evaluation which will produce meaningful results.

- 34 *Management Information Services: Measuring the Effectiveness of Municipal Services*, ICMA, Vol. 2, No. LS-8, August, 1970.

Reports by Management Information Service are published monthly by ICMA. The report quoted above is a concise treatment of measures being developed to help municipalities determine the level of service being provided. In particular, this report centers on measures of effectiveness. It defines the terms, gives relevant examples and outlines the experiences of four municipalities with effectiveness measures.

- 35 *Manual on Measuring Results: Law Enforcement and Criminal Justice Projects and Programs*, Prepared for staff members of the Arkansas Commission on Crime and Law Enforcement, Louisiana Commission on Law Enforcement and Administration of Criminal Justice, New Mexico Governor's Council on Criminal Justice Planning, and Oklahoma Crime Commission, December 1973.

Detailed and comprehensive manual discussing all aspects of evaluation. Useful guide to those being introduced to evaluation of projects, programs. Not limited in applicability to law enforcement or justice programs.

- 36 Marshall, A.H. *Financial Management in Local Government*, George Allen and Unwin Limited, London, England, 1973.

This book contains a valuable analysis of the role of financial management in English local government. Written for other managers, as well as finance officers, it helps to place the financial function within the corporate planning framework. PPB and its elements are explained, the area of measures reviewed, and the more traditional finance functions related to the more recent management approaches. The author also explores the relationship between elected officials and managers, and the roles of the chief financial officer and his department. Throughout, the author maintains a historical perspective and discusses possible future developments.

- 37 Milward, Robert E., 'PPBS: Problems of Implementation', *Journal of the American Institute of Planners*, March, 1968, pp. 88-94.  
Written at the height of popularity of the PPB system, this article attempts to put a damper on enthusiasm by pointing out some of the system's inherent conceptual and operational weaknesses and by suggesting that PPB alone would not solve the immense problems faced by public administrators.
- 38 Murray, Thomas J., 'The Tough Job of Zero Budgeting', *Dun's Magazine*, October 1974, pp. 70-72 and 128-130.  
A concise article on the introduction experiences associated with zero base budgeting. Although the author does discuss some of the pitfalls with using this technique, he cites numerous examples where zero base budgeting has proven successful.
- 39 Mushkin, Selma J., 'PPB in Cities', *Public Administration Review*, Vol. 29, No. 2, March/April, 1969, pp. 167-178.  
Included in a symposium on PPB, this article describes some of the special problems encountered by cities which implement the system. The author draws on her experience as director of the innovative '5-5-5 Project', in which PPB was introduced to five city, five county, and five state governments in the late Sixties.
- 40 Norton, Ronald J., *Citizen Survey - The Ombudsman of the Seventies*, Prepared for presentation at the 1974 National Conference on Public Administration.  
An example of a municipality's attempt to determine the services that its citizens want, by the use of mail surveys. The aim of this program is an attempt to improve the effectiveness and efficiency of the municipality's operation through the improvement of several major functions.
- 41 Novick, David (editor), *Current Practice in Program Budgeting (PPBS): Analysis and Case Studies Covering Government and Business*, Crane Russak, for the Rand Corporation, New York, 1973.  
This book clearly and thoroughly covers the state of practice in PPB up to 1971. The authors provide five introductory chapters describing program budgeting, giving a brief history and evaluation of it. This is followed by a series of case histories on PPB in nine national governments (including two articles on Canada), two state governments, an English local government, New York City, and two private organizations.
- 42 Novick, David, 'The Origin and History of Program Budgeting', *California Management Review*, Fall, 1968, Vol. 11, pp. 7-12.  
The history of program budgeting in the federal government is traced back to the War Production Board in 1942. From here the author describes PPB evolution in industry and government.
- 43 *Public Administration Review*, 'Symposium on Productivity', Vol. 32, #6, November-December, 1972. Centre for Productive Public Management, John Jay College, New York, New York.  
A symposium containing essays from thirteen authorities on productivity and productivity measurement. Includes accounts of the experience of New York, Wisconsin, the Federal Government, and productivity in government generally.
- 44 *Public Productivity Review*, Vol. 1, No. 3, March, 1976. Centre for Productive Public Management, John Jay College, New York, New York.  
Papers and edited commentaries presented at the conference on 'Productivity and Program Evaluation: Challenge for the Public Service' held on June 6, 1975, in Chicago. Authors include Thomas L. Guthrie, Harry Hatry, Charles R. Wise, to name a few.
- 45 *Public Productivity Review*, Vol. 1, No. 4., Special Issue: Bibliography, 1976. Centre for Productive Public Management, John Jay College, New York, New York.  
Publication provides a bibliography identifying all major works relevant to measuring and improving public sector productivity. Each publication is annotated and categorized under useful headings. The publication also provides an author index, title index, and a list of NCOP current publications. (This publication is being updated with 1977 Bibliography to be published in Fall, 1977).
- 46 Pyhrr, Peter A., *Zero Base Budgeting: A Practical Management Tool for Evaluating Expenses*, Wiley, New York, 1973.  
This book is considered to be a valuable reference by those managers who are interested in the application of ZBB to their operations.
- 47 Research and Policy Committee of the Committee for Economic Development, *Improving Productivity in State and Local Government*. Committee for Economic Development, March, 1976.  
This publication encourages the better management of resources rather than focusing on input and output. It discusses areas that are amenable to improvements in management and Federal-State responsibility in this area.
- 48 Robinson, A.J., *Economic Evaluation of Municipal Expenditures: PPB*, Canadian Tax Papers No. 52, Canadian Tax Foundation, Toronto, March, 1971.  
Following a brief introduction outlining the history of urbanization in Canada and the role of municipal government, the author provides a description of PPB as a system for municipal government. Topics in this section include; definition of a program, objectives of municipal government, the place of objectives in PPB, incremental budgeting and PPB, and multi-year budgeting. In discussing these to-



pics, the author provides numerous examples from municipalities which have used the system, particularly New York City and the 5-5-5 Project Cities. The final section is concerned with how to implement PPB.

- 49 Ross, J.P., and Burkhead, J., *Productivity in the Local Government Sector*, Lexington Books – D.C. Heath and Company, Lexington, 1974.  
The overall goal of this lengthy study is to provide a means for answering questions about performance in local government. The mathematical model developed in this work provides such a technique. Results of the study indicate low rates of productivity growth for a number of local government functions. Recommendations for future action are made.
- 50 Schainman, P.S., and Swartz, J., *Measuring Fire Protection Productivity in Local Government*, National Fire Protection Association, Boston, Mass., October, 1974.  
Problems in measuring productivity in local fire protection and prevention are explored. An approach to making meaningful measurements is presented.
- 51 Schick, Allen, 'A Death in the Bureaucracy: The Demise of Federal PPB', *Public Administration Review*, March/April, 1973, pp. 146-156.  
Discusses the many reasons why PPB failed in the U.S. Federal Government and the effect its disappearance would have in the future. Primary among the reasons for failure was the method of implementation which was quick, across-the-board and with little or no consideration given to budget traditions, institutional loyalties or personal relationships.
- 52 Segsworth, R.V., 'PPBs and Policy Analysis: The Canadian Experience', *International Review of Administrative Sciences*, Vol. 38, 1972, pp. 419-425.  
Covers the history of PPB in Canada – The Glassco Report and its effects at the federal level.
- 53 Skok, James E., *Second Generation Adaptations of the Planning-Programming - Budgeting System in Pennsylvania*, Prepared for presentation at the 1976 National Conference, American Society for Public Administration, Washington, D.C., April 19-22, 1976.  
This article reports the results of a study to determine and identify those aspects of PPB systems which are successful and the conditions associated with this success. Study evaluates the experiences of the Commonwealth of Pennsylvania with the PPB system.
- 54 Social Science Research Council, Centre for Social Indicators, *Social Indicators Newsletter*, No. 10, September, 1976.
- 55 State Department of Urban Affairs, *Stage Report of EVAM Project*, Ottawa, April, 1973.  
An interim report of a study being conducted in the Province of Quebec into municipal indicators.
- 56 Sterns, A.A., 'Management Accounting for Government', *Cost and Management*, December, 1967, pp. 20-23.  
This short article outlines the limitations of the old system of planning and controlling of government expenditures in Canada and the U.S. that led up to the Glassco Commission's recommendations for administrative reform.
- 57 Teitz, Michael B., 'Cost Effectiveness: A Systems Approach to Analysis of Urban Services', *Journal of the American Institute of Planners*, September, 1968, pp. 303-311.  
Discusses the problems involved in using PPB at the local level, particularly the difficulties of setting objectives. Presents a model of systems analysis applicable to municipal services. Also discusses cost effectiveness, a measure which relates output to the achievement of objectives without necessarily describing output in terms of dollars.
- 58 Wallace, Robert J., *Occasional Paper No. 26, Productivity and the Fire Service*, Metropolitan Studies Program, Maxwell School of Citizenship and Public Affairs, Syracuse University, December, 1975.  
This paper explores the problems encountered in measuring the productivity of the fire service. A review of the previous attempts at fire safety productivity measurement is made and the author suggests alternative measures of fire service productivity.
- 59 Webb, Kenneth and Hatry, Harry P., *Obtaining Citizen Feedback: The Application of Citizen Surveys to Local Government*, The Urban Institute, Washington, D.C., 1973.  
This book deals with the use of citizen surveys, one of the major recent advances in measuring local government performance. The authors describe several uses of citizen surveys and point out the dangers and pitfalls involved. Further chapters discuss survey procedures, costs and funding sources, organizational options for undertaking surveys and conclusions and recommendations. Several examples of citizen surveys are provided as illustrations.
- 60 Wholey, Joseph S., 'What Can We Actually Get From Program Evaluation?' *Policy Sciences* 3, Elsevier Scientific Publishing Company, Amsterdam, 1972, pp. 361-369.



This paper assesses the role program evaluation can play in assisting decisions on public programs. The author looks at evaluation from the standpoint of decision-makers interested in finding out the 'right' answers about their programs. The discussion focuses on the assistance that various types of evaluation can give to program managers and to policy-makers concerned with legislative changes and budget levels. The paper includes examples of relevant evaluation work. The concluding section analyzes some of the problems decision-makers face in trying to get reliable, useful evaluation.

- 61 Wilcox, Leslie D., Brooks, Ralph M., Beal, George M., and Klonglan, Gerald E., *Social Indicators and Societal Monitoring: An Annotated Bibliography*, Jossey-Bass Inc., San Francisco-Washington, 1972.

This book provides an annotated bibliography of articles, books, etc. dealing with the areas of social planning and societal monitoring. Four separate indices are provided to aid the reader in locating articles of interest.

- 62 Wildavsky, A., and Hammond, A., 'Comprehensive versus Incremental Budgeting in the Department of Agriculture', *Administrative Science Quarterly*: 10, 1965, pp. 321-346.

Article describes and evaluates the introduction of zero based budgeting in the Department of Agriculture. The problems that were encountered with the change over from line budget to zero based budget are well outlined.

- 63 U.S. Dept. of Labor, *The Meaning and Measurement of Productivity*, Bulletin 1714, Bureau of Labor Statistics, 1971.

Two papers prepared as background material for members of the National Commission on Productivity. The first by Herbert Stein is concerned with clarifying what is meant by productivity, and why it is important. The second paper, by Jerome A. Mark is concerned with concepts and measures of productivity. Output, labour input and capital input are explained, and problems of measurement discussed. Various recommendations are also made. Charts are included.

#### Publications by the Treasury Board of Canada

- 64 Andras, R. Hon., President of the Treasury Board of Canada, *Progress Report on the Measurement of Performance in the Public Service of Canada*, November, 1976.

Reviews the development of the performance measurement concept within the federal government departments, including its introduction, current status and future directions. Examples include the Unemployment Insurance Commission, the Departments of Consumer and Corporate Affairs, Post Office, Public Works, Revenue, Supply and Services, Veterans Affairs, and Health and Welfare.

- 65 Andras, R. Hon., President of the Treasury Board

of Canada, *Performance Measurement in the Public Service of Canada*, Statement made in the House of Commons, November 17, 1976.

Re-affirms the government's intention to introduce performance measurement in the Federal Public Service. Outlined are the goals of the program, the benefits expected and the limits of the concept.

- 66 Mastronardi, E.J., *The Measurement of Operational Performance*, Efficiency Evaluation Division, Planning Branch, Treasury Board Secretariat, June, 1972.

A discussion of measures of effectiveness relating both to PPB and MBO. Mostly presented in chart form, this paper covers the area of measuring effectiveness very well.

- 67 Osbaldeston, G.F., *Evaluation of Public Programs: A Treasury Board Viewpoint*, March 29, 1974.

Developments in the Federal Public Service are discussed, including Planning Programming Budgeting System, OPMS, benefit cost analysis, and strategic planning. The author discusses how each of these ongoing activities fits together in the management of the public sector.

- 68 The Treasury Board, Planning Branch – Performance Measurement Policy Division, *A Manager's Guide to Performance Measurement*, October, 1976.

This booklet describes the concepts upon which performance measurement in the federal government is based. Examples are drawn from the Departments of Health and Welfare, Revenue and the National Capital Commission. The examples show how savings have been achieved in the cost of providing essential government services.

- 69 The Treasury Board, *Operational Performance Measurement: Volume I, A Managerial Overview*, Ottawa, January, 1974.

The purpose of this publication is to describe a comprehensive system for the measurement of operational performance. The Operational Performance Management System (OPMS) deals with:

- a comparing efficiency and effectiveness over time;
- b predicting future resource requirements on the basis of the forecast output, and past and current levels of efficiency; and
- c assessing the quantitative dimensions of managerial performance.

This manual serves as a technical reference work which provides detailed information on the principles, procedures, and processes associated with OPMS.

- 70 The Treasury Board, *Operational Performance Measurement: Volume 2, Techniques*, Ottawa, 1974.

A more technical treatment of OPMS, this publica-

tion analyzes considerations of design, implementation, and maintenance of such a system. (This volume is meant to be read following the Treasury Board's, *Operational Performance Measurement, Volume I*.)

#### Publications by the Urban Institute

The Urban Institute has produced a great many essays, studies and papers on productivity in the public sector. Some are listed below. An up-to-date bibliography of Urban Institute publications can be obtained from the Institute's Publications Catalog 1977. This also includes a section on forthcoming publications.

- 71 Block, Peter B., *Equality of Distribution of Police Services: A Case Study of Washington, D.C.*, The Urban Institute, Washington, D.C., February, 1974.

A study comparing the equality of police service in two sections of the District of Columbia, one predominantly black and poor, the second white and affluent. Measures used in evaluation include workload measures and effectiveness measures. The implication of the study is that citizen surveys can be used as a method of discerning the effectiveness of police services.

- 72 Block, Peter B., and Specht, David I., *Evaluation of Operation Neighbourhood*, The Urban Institute, Washington, D.C., December, 1973.

An evaluation of neighbourhood team policing in New York City is presented. Workload, effectiveness and citizen input measures are used to evaluate this concept, as well as the opinions of the police officers.

- 73 Fisk, Donald M., *The Indianapolis Police Fleet Plan: An Example of Program Evaluation for Local Government*, The Urban Institute, Washington, D.C., October, 1970.

A case history involving a police department is outlined, describing the steps taken, the evaluation used and the results achieved.

- 74 Fisk, Donald M., Hatry, Harry P., and Kimmell, Wayne A., *Practical Program Analysis for Local Governments*, The Urban Institute, Washington, D.C., October, 1972.

The report opens with a discussion of 'institutional' issues which may substantially affect the utility of program analysis and makes recommendations on practical ways to develop and use analysis within the constraints of government. The report discusses the role of the chief executive and urges that analytical work be linked directly to the policy-making process to ensure that analysis is done on major policy issues which count. Criteria for selecting issues for analysis are presented; scheduling and monitoring analytical work is suggested; the elements of a formal issue selection and analysis are discussed; and suggestions for larger jurisdictions are identified. Staffing and organizing for analysis

is discussed, and suggestions are made for using internal and outside analytical resources to best advantage. Case study findings are presented on the major factors which seem to affect the impact of analysis on policy.

- 75 Fisk, Donald M., Schainman, P.S., and Hatry, H., *Comparative Productivity Analysis of Local Governments: Some Findings and an Agenda for Future National Efforts*, The Urban Institute, Washington, D.C., November, 1972.

The final report of a study designed to investigate local government productivity. The basic questions to which it addresses itself concern the possibility of improvement of local government productivity data bases. The findings of the report form the basis for recommendations to the Department of Housing and Urban Development.

- 76 Fisk, Donald M., and Lancer, Cynthia A., *Equality of Distribution of Recreation Services: A Case Study of Washington, D.C.*, The Urban Institute, Washington, D.C., 1974.

Addresses the question of whether two geographic areas of Washington, D.C., receive equal recreation treatment. The authors develop a methodology applicable to comparing public recreation services.

- 77 Hatry, Harry P., *Overview of Modern Program Analysis Characteristics and Techniques - Modern Program Analysis - Hero or Villain?*, Urban Institute Reprint from National Association of State Budget Officers, Council of State Government, 1969.

Two papers which deal with program analysis. The first distinguishes between program analysis, program budgeting and PPB and reviews the basic elements of analysis. The second paper explores relevant applications of program analysis, identifies some dangers involved and suggests ways and means of improving program analysis.

- 78 Hatry, Harry P., *Can Systems Analysis be Institutionalized in Local Government*, The Urban Institute, (reprint), Washington, D.C., 1970.

A paper urging the regular use of systems analysis in local government. The need for systems analysis is outlined and barriers to its institutionalization pointed out. The status of systems analysis in local government is summarized and the role of PPB explored. Finally some conclusions and recommendations are offered.

- 79 Hatry, H.P., Blair, L., Fisk, D., Kimmell, W.A., *Program Analysis for State and Local Governments*, The Urban Institute, Washington, D.C., 1976.

This is a companion report to *Practical Program Evaluation for State and Local Government Officials*. This book outlines a systematic approach to estimating both the costs and effectiveness of future state and local programs.



- 80 Hatry, H.P., Winnie, R.E., and Fisk, D.M., *Practical Program Evaluation for State and Local Government Officials*, The Urban Institute, Washington, D.C., 1973.

A report designed to help public officials develop or improve their program evaluation capabilities. Contains concrete practical suggestions as to how to identify specific program objectives, outlines criteria for measuring progress towards these objectives and identifies the population segments that are likely to be affected by the program.

- 81 Kimmell, W.A., Dougan, W.R., and Hall, J.R., *Municipal Management and Budget Methods: An Evaluation of Policy Related Research, Final Report, Volume I: Summary and Synthesis*, The Urban Institute, Washington, D.C., December, 1974.

This important volume describes and evaluates the utility and effectiveness of management and budget methods available for use by municipal governments. Among those discussed are, management by objectives, program evaluation, systems, program and policy analysis, program budgeting, performance budgeting, planning programming budgeting systems, service effectiveness measurement, community goals studies. Each of these topics is supplemented with its own bibliography.

- 82 *Search - A Report from the Urban Institute*, Vol. 5, No. 1-2, Spring, 1975.

Report contains brief articles about Urban Institute research activities, and identifies staff and publications associated with the research. In this report the efforts of the City of Orange and Flint, Michigan, are evaluated.

- 83 Webb, Kenneth and Hatry, Harry P., *Obtaining Citizen Feedback: The Application of Citizen Surveys to Local Governments*, The Urban Institute, Washington, D.C., 1973.

In this publication the authors present their case for using surveys as an important mechanism by which governments may obtain feedback on public service. Included is a description of the use to which surveys may be put, how to survey, the dangers and pitfalls in citizen surveys and recommendations for governments who are contemplating this route.

- 84 Wholey, Joseph S., *The Absence of Program Evaluation as an Obstacle to Effective Public Expenditure Policy: A Case Study of Child Health Care Programs*, The Urban Institute, (Reprint), Washington, D.C., undated.

The author presents a case study of an attempt to apply PPB analysis to child health care programs. He points out a major weakness in the PPB system and offers some recommendations for improving the economic evaluation of government's social programs.

- 85 Winnie, Richard E., and Hatry, Harry P., *Measur-*

*ing the Effectiveness of Local Government Services: Transportation*, The Urban Institute, Washington, D.C., 1972.

A document intended to aid officials involved in determining the quality of local transportation services being provided. Proposed is a system of establishing transportation objectives and effectiveness measures. Examples are given of effectiveness measures that are intended to apply to all modes of transportation. A significant portion of the publication describes procedures whereby data may be collected for each of the effectiveness measures desired.

- 86 Young, Dennis R., *How Shall We Collect the Garbage? A Study in Economic Organization*, The Urban Institute, Washington, D.C., 1972.

Intended primarily for local officials, this document questions the organization of garbage collection and offers recommendations to overcome the present situation. The case is made that garbage is becoming big business and that new changes in the organization of refuse collection must be forthcoming to protect the public interest and to improve the performance of this industry.

- 87 The Urban Institute and the International City Management Association, *Measuring the Effectiveness of Basic Municipal Services: Initial Report*, The Urban Institute and the International City Management Association, February, 1974.

A report on a project undertaken jointly by the Urban Institute and the ICMA in St. Petersburg, Florida and Nashville-Davidson, Tennessee. The project involves a comprehensive effort to implement an extensive performance measurement and evaluation system in the two municipalities. The report is written for the benefit of other local government administrators and provides a number of measures and measurement techniques which may be used.

- 88 The Urban Institute, *The Status of Productivity Measurement in State Government: An Initial Examination*, Washington, D.C., September, 1975.

This report studies the availability of feedback information on municipal operations. Consistently, this information was sparse. The study was undertaken with the co-operation of the National Association of State Budget Officers and consequently economic development measures were stressed.

#### Publications by the National Commission on Productivity

- 89 National Commission on Productivity, *A National Policy for Productivity Improvement*, Washington, D.C., October, 1975.

A statement by the Commission members of NCOP regarding their current thinking on national productivity policy. Covered by this report are, pro-



ductivity and the internal interest, human resources, technology capital investment and government regulations.

- 90 Hatry, Harry., et al., *The Challenge of Productivity Diversity: Improving Local Government Productivity Measurement and Evaluation*, Report prepared for the National Commission on Productivity and Work Quality, the Urban Institute and the International City Management Association, Washington, D.C., June, 1972.

A four volume study covering the area of performance measurement and evaluation in general and focusing in particular on the areas of solid waste collection and crime control. Much of the more recent research and several of the projects of the Urban Institute and the ICMA are based on this study.

- 91 National Commission on Productivity and Work Quality, *Employee Incentives to Improve State and Local Government Productivity*, Washington, D.C., March, 1975.

A broad view of incentive programs across the United States is provided. Particular areas addressed include: attendance incentives, career development, competitions and contests, educational incentives, job enlargement, performance bonuses, productivity bargaining, work standards, etc. This publication represents the most comprehensive survey to date in the incentives area.

- 92 The National Commission on Productivity and Quality of Working Life, *Jurisdictional Guide to Productivity Improvement Projects*, 3rd ed., Prepared by the International City Management Association, Washington, D.C., July, 1976.

A variety of local governments have experimented with productivity improvement in several operational areas. This report presents information on a large number of productivity improvement programs embracing a wide spectrum of methods implemented by local governments throughout the United States. The projects listed are grouped under the following headings: energy conservation, general administration, inspections, library service, parks and recreation, public health, public safety, public transit, and public works. This publication is one in a series, updated annually. In the future it will be published by ICMA and distributed on a subscription basis.

- 93 National Commission on Productivity, *Improving Municipal Productivity: The Detroit Refuse Collection Incentive Plan*, Washington, D.C., April, 1974.

The background, history, and progress of the Detroit refuse collection productivity improvement plan presented in a short case study format.

- 94 National Commission on Productivity and Work Quality, *Improving Municipal Productivity: Work*

*Measurement for Better Management*, Washington, D.C., November, 1975.

This report describes analytical techniques used for methods improvement and work measurement. It contains numerous illustrations of how these techniques have been applied to enhance efficiency in local government.

- 95 National Commission on Productivity, *Improving Police Productivity: More for your law enforcement dollar. A brief for elected officials*, Washington, D.C., undated.

A pamphlet outlining key questions that elected officials should ask when considering police productivity. Based on the findings of the National Commission on Productivity's Advisory Group on Productivity in Law Enforcement, the pamphlet is written in a clear and simple style.

- 96 Hatry, H.P., and Fisk, D.M., *Improving Productivity and Productivity Measurement in Local Government*, A report for the National Commission on Productivity, The Urban Institute, Washington, D.C., June, 1971.

Discusses reasons for productivity analysis, major technical problems, current measurement methods and possibilities for improvement.

- 97 National Commission on Productivity, *Improving Productivity in Solid Waste Collection: A Brief for Elected Officials*, Washington, D.C., undated.

A pamphlet written for elected officials, outlining key questions now facing municipalities regarding this service.

- 98 National Commission on Productivity and Work Quality, *Labour-Management Committees in the Public Sector*, Washington, D.C., November, 1975.

This report deals with the experiences of eight labour management committees which have been operating in various local and Federal Government agencies in the U.S. The report deals primarily with committees' handling of productivity improvement issues.

- 99 National Commission on Productivity, *Managing Human Resources in Local Government: A Survey of Employee Incentive Plans*, The Urban Institute, Washington, D.C., October, 1973.

The purpose of this survey was to describe a variety of employee incentives being attempted in local governments throughout the U.S. Guidelines are offered for expanding these applications to other areas and criteria are provided for evaluating the effectiveness of such incentives.

- 100 National Commission on Productivity, *Opportunities for Improving Productivity in Police Services*, Report of the Advisory Group on Productivity in Law Enforcement, Washington, D.C., 1973. Advisory group composed of police adminis-

trators, criminal justice planners, academics, etc. Report considers productivity in context of police services, productivity in patrol, crime prevention programs, managing human resources, and barriers to productivity improvement. A bibliography is also included.

- 101 National Commission on Productivity, *Opportunities for Improving Productivity in Solid Waste Collection*, Report of the Solid Waste Management Advisory Group, Washington, D.C., 1973.  
Report of advisory group made up of public works directors, municipal officials, labour leaders, etc. Considers the potential for productivity improvement, measuring collection productivity, principal collection problems, tools for improving productivity, and actions to improve productivity. A list of references is included.
- 102 National Commission on Productivity and Work Quality, *Productivity Centers around the World*, Washington, D.C., May, 1975.  
Publication describing the role, history, function and organization of productivity centers. Throughout much of the industrialized world, countries have established 'productivity' centers to encourage new developments in improving productivity.
- 103 National Commission on Productivity, *Public Sector Labor Management Committee: A Case Study*, Washington, D.C., undated.

Brief publication reporting on the efforts of a labor management committee at the Defense Supply Agency's organization at Mechanicsburg, Pennsylvania. Presented is the background to the agreement, control clauses on productivity, and the first year results.

- 104 National Commission on Productivity and Work Quality, *The Role of Productivity in Controlling Inflation*, Washington, D.C., December, 1974.  
This short paper relates the contribution of productivity improvement to the contemporary inflation problem and reviews the current causes of inflation.
- 105 National Commission on Productivity and Work Quality, *So Mr. Mayor, You Want to Improve Productivity ...*, Washington, D.C., 1974.  
A primer on why local governments need productivity improvement programs and how a mayor should go about setting up and running such a program.

## Appendix III

### Project Publications

The investigations required for the design of this Project have led to some publications and working papers. As the Project proceeds and develops over the four years, additional publications will be forthcoming - originating from the Project Team at the School of Business, Queen's University at Kingston. These publications will be available for purchase on the publication date indicated on the attached order form. Orders should be sent to the Ontario Government Publication Centre, Ministry of Government Services, 3B-7 MacDonald Block, Queen's Park, Toronto, Ontario, M7A 1N8.

Apart from the *Project Overview Statement*, the various publications have been grouped into four series.

#### PROJECT OVERVIEW STATEMENT

This paper describes the Project in overview fashion. It contains a statement of the goal and objectives of the Project, a description of the goal and objective setting process, and the documentation and evaluation processes to be used in the study. Price \$1.00.

#### SERIES A PUBLICATIONS: PROJECT DOCUMENTATION AND EVALUATION

The purpose of this series of papers is to describe the experiences of the four Project Municipalities, to analyse those experiences, and to indicate their possible relevance to other municipalities. This series will also include papers outlining the design of the evaluation process, as well as periodic reports on the evaluation of the Project.

- 1 *The LGMP Experience: Phase I.* This paper traces the Project from its inception in 1972 through various approval stages ending with the approval of the Project by each of the four participating municipalities. Price \$2.00.
- 2 *The LGMP Experience: Phase II.* This paper traces the Project through its early implementation stages, ending at the termination of the second full year of funding. Price \$3.00.
- 3 *The LGMP Experience: Phase III.* This paper concludes the detailed story of the Project, ending with a summary of recommendations for other municipalities. Price \$3.00.
- 4 *The LGMP Experience: The LGMP and Organizational Change.* This final publication will include an overall perspective on the LGMP and an evaluation of the total experience. The analysis section, in this case, will be an analysis of the complete project and the paper will end with a section on the broad impli-

cations of similar major programs of organizational change for other local government organizations. Price \$4.00.

- 5 *The LGMP Experience: Guidelines for Organizational Change in Local Government.* As they identified requirements for management improvement, the Project Team attempted to meet training needs and developed working papers explaining the procedures they had used. In total, these working papers, which have been edited and included in one publication, provide a framework or guide for various aspects of organizational change in local government. Price \$4.50.

#### SERIES B PUBLICATIONS: TECHNICAL PAPERS

The purpose of this series of papers is to present reasonably concise descriptions of broad areas of municipal management and administration as they relate to various aspects of the Project. These papers, which describe the state of practice and experimentation of the various areas, have been written for elected and appointed local government officials.

- 1 *Determining Goals for Local Government.* This paper examines the planning process and its contribution to local government at both management and policy levels. It outlines the role of goals and objectives within planning and stresses its importance as an on-going adaptive process. Annotated bibliography. Price \$3.00.
- 2 *Improving Management Performance.* An examination of the topic of performance measurement emphasizing managerial performance, including examples of indicators in use in a number of municipalities. Annotated bibliography. Price \$5.00.
- 3 *Organizational Change in Local Government.* This paper describes the general field of organizational development in municipalities and summarizes the experiences of two municipalities. Annotated bibliography. Price \$3.00.
- 4 *Systematic Approaches to Information in Local Government.* An examination of the general field of information systems and a suggested approach to the systematic development and use of information in local government. Annotated bibliography. Price \$3.00.

#### SERIES C PUBLICATIONS: CASE STUDIES

The purpose of this series is to describe various municipal experiences with programs related to the goal and



objective setting process. The case studies are suitable for instructional purposes to focus discussion on the broad areas which the cases represent.

- 1 *Goals for Dallas 'A'*. The Dallas, Texas experience with broad goal setting, involving extensive public participation. The 'A' case reviews the program from its inception in 1965 to 1972. Price \$2.00.
- 2 *Goals for Dallas 'B'*. The Dallas, Texas experience with broad goal setting, involving extensive public participation. The 'B' case examines the program from 1972 to 1974. Price \$2.00.

#### SERIES D PUBLICATIONS: PERIODIC PAPERS

The purpose of these papers is to describe various aspects of the Project which are felt to be of interest to municipalities contemplating the introduction of a system of goals and objectives.

- 1 *Developments in the Management of Local Government — A Review and Annotated Bibliography*. This paper was prepared to provide local government managers and elected representatives with a description of current developments in the field of local government. The paper describes ten areas of development in the management of local government and supplies annotated bibliographies of books, articles and reports dealing with these areas. Price \$2.00.



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